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VOLUME 36

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,
vs.
The Gold Run Ditch and Mining Co.

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S. BELCHER, A. L. RHODES, RICHARD BAYNE.

For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B. DIBBLE, A. P. CATLIN.

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The People of the State of California
vs.
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Winfield J. Davis
Official Reporter

In the Superior Court of the State of California in and for the County of Sacramento.

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Testimony
of
O. P. Stigar
Direct resumed

Mr. Dibble. To what extent was and is such discharge and in such manner through these mining avenues and upon lower lands and lower mining claims, the practice?

A Such was universally and of necessity, sir, universally and of necessity

Q What do you mean by stating universally?

10157

A I say it was the practice all through the mining region of the country wherever there has been high hill mining or what we call hydraulic mining in contra distinguishment to placer mining or rocker mining, wherever that way prevailed it was universal to run the tailings into the river channels, or into channels that led into the river, it was universal all over the mining region where I have heard of it or read of it, or knew of it

2. And upon the lower Mining Claims.? A Yes sir, as I referred to the Cleveland Claim a short time ago

I mean the Creek that I referred to in that Cleveland matter

2. Why by necessity? A Because there is no way in God's Heavens by which

Chopped in the mountains of this country can be realized except by washing into the main channels or into channels that will lead into the main; there is no other way and therefore it was a necessity.

2 What Elements of power are used in gravel mining? Well, sir, there is manual labor, water power — power is one of the great Elements and force or pressure — power is a very great element in gravel mining now-a days — the use of it.

2 Compare the amount of water used in mines prior to 1870 with the used in mines since 1870 from the gravel beds?

Well sir, prior to 1870 in what we term hydraulic mining in contra di-

tinguishment as I said to placer mining 300 inches of water would have moved more debris from the hill mines than 1500 inches would move now-a days in my estimation and in my judgment 300 inches of water with the grades we had in the flumes would have moved more material in these high hill mines and gravel mines than 1500 inches of water does now-a days, because then we washed the surface altogether, that was what we termed surface above this heavy cement.

Q. In carrying the bedrock wench of this dense material what course does it take? A Norm where you first take it from the bank?

Q By tunnels?

A I was going to remark it passed through sluice

10160

boxes and run through tunnels and then passing down through sluices outside of the tunnels along on the riven edge or wherever it could get sufficient fall and dumb, and the heavy material passes over and the lighter material passes through the undercurrents and that light material passes out again from the undercurrents into the streams that lead into the river if not into the river and then the heavy material passes there and the light material drops through the iron bars in the sluice boxes in to what is called the under currents underneath and spreads out and passes off and the water carries the material right over the edge into the river or wherever the undercurrent might Empty.

Q You speak of the main

avenue being the tunnels?
A Yes sir
2 Non discharge. State length and cost of the tunnels in Nevada County connected with the working of the gravel channels?
Mr Hart. I shall object to that as irrelevant and immaterial. They have gone into the proof that the industry is a great one, and I do not think it is material to go into the minuter details as to the tunnels
The Court. Certainly those matters are only secondary in this inquiry.
Mr Dibble I want to show that the tunnels have cost in that County alone over $1,000,000 as a fact in the case as showing the magnitude of the industry. That is important as showing the importance of the industry and the interests

10162

involved.

The Court. It seems to me we have had Enough about that matter. I understand that there has been Evidence tending to show that this is a great industry and a great deal of money has been put into it, and a great of gold was expected to be taken out

Mr. Dibble (after discussion) I understand The Court to prevent my going in to the testimony and asking the question. I offer to prove by the witness that the Cost of the tunnels in Nevada County to be used in the working of the mines in this dense heavy material, has been to Exceed $10,000,000.

Ex. Objection is sustained and the defendants except.

2. You have referred to water as an element of power in the working of gravel

10163

channels, from what source is the water obtained?

A It is obtained from the melting of the snows, high up in the mountains just above where the mines are located, and also from the rain fall and from springs that run into the streams and reservoirs.

Q State the capacity of the storage reservoirs of Nevada County?

A It is very immense — take the lakes of the Eureka Lake Company, the Bowman Dam and the Milton Dam and all the reservoirs of the Eureka Lake Company routes, I do not know that I could state exactly, the capacity is very immense, sir, very immense millions and millions of inches.

Q And the South Yuba?

A Yes sir, I include the

10164 South Yuba and the Excelsior

that heads up in near where I live and takes the water from there

Q. You say it is immense

A Yes sir, very immense.

Q. When is the water stored? A In the winter seasons mostly and the spring the melting of the snows in the spring and the warm rains that melt off the snows

Q For what purposes?

A For mining purposes entirely sir, some of it is used for agricultural purposes and irrigating a little down in our section of the country, but very little most all for mining purposes

Q What is the aggregate length of the ditches in Nevada County?

A Over 1000 miles sir, taking the aggregate number of miles, over 1000

10165 Q For what purpose

Constructed? All constructed for mining purposes entirely, not one that I know of has been constructed for any other purpose.

2 State whether those ditches could be used for any other purpose except mining purposes and kept open?

A No sir, they could not, no other purpose. It could not pay the expense of keeping them open for any other purpose.

2 What is the population of Nevada County that is dependant upon the mining industry? A I estimate the population of Nevada County at 22,000 souls and I estimate that 20,000 of them are dependant upon the mining industry sir.

2 What proportion of the people in the ridges are dependant on land culture and State whether they are

10166

A There are a few farms in the neighborhood of San Juan, perhaps half a dozen that cultivate little tracts of land, but most every miner has a garden which he cultivates for himself, most every miner that has a home there cultivates a little garden around his premises and some have fruit trees planted and shrubbery and so forth and have a very nice little house and sit under their own vine and fig tree and live a pretty happy life when they are permitted to do so, when these persons in the valley will allow them to go on with their industry, but there are very few farms cultivated in the mine, that is, as farms, who give their entire attention to farming.

Q Miners have got homes and cultivate their ranches?

A Yes sir they would have a nice place, that is those that have families.

Q From what source of information do you estimate the population, dependant upon mining to be 2000.

A I took the voting population, I took the vote of the County as cast and I estimate that there is about 5 person to one voter, then I took the school district of the County and I estimate that there is about so many inhabitants to the children and I got that result in that way, that is the way I estimated. I also have examined the Great Register of our County and I found in our Great Register there were over 7000 names upon it, but I know there is not that many people there are over 7000 names of voters and if I multiply

that by five as I generally do it would make 35000. but there are not that many people there in my estimation. We have a great many school districts in our County and very fine School houses constructed almost all of them would do honor to most of the cities and some of them would be an honor to this City, and if you stop mining you would destroy that entire property. That is the way I get at the estimate of the number of inhabitants

Q Compare the mining wash of Nevada County prior to 1862 with the mining wash since 1862, up to 1875 and state the result?

A The mining wash up to 1862, compare it with the mining wash from 1862 to 1875 is that the question?

Q Yes sir? Since 1862

10169

up to 1875?

A I should put it at 50 times more, the mining work more than 50 times greater from 1862 than it has been from 1862 to 1875.

Q Compare the wash since 1875 up to the present day compared with the wash since 1875 up to the present time?

A I would double the quantity then and call it 100 times greater.

Q What other than mining wash has there been in Nevada County?

A There have been slides, land slides that I have witnessed myself, I have seen land slides that covered acres and acres and the land slid off and all went into the rivers, it washed into the rivers and there is the wash from the roads, and wash from the construction of new roads, and wash from

10170

the canons of the hillsides, the roads are steep there in the mountains and in the winter time when the water flows down there are large cavers from the upper side of the road, and that washes down, and there is the natural dust of the summer season from wagons driving over it then there is the descending of the mountains of timber and the effects of frosts that we have there in the upper part of the ridge and the loosening up of a good deal of the soil and when the rains come in the Spring, it carries that all down all together, it carries everything with it. The wash is very great outside of the mining wash, the hillsides are steep and there is a great deal of plowing and shading up of the ground and all that sort of thing carries a great deal.

10171

Q. and frost? A Yes sir, I mentioned frost

Q You speak of roads, what comes you in aggregate the length of roads in Nevada County from which the wash taken place? A Oh, the roads of Nevada County on these hill sides and around the hill sides and the rail road, the construction of the rail road, we have a rail road construction to there, built by the miners to carry to the miners the necessary wants of life and such articles as miners needed, miners supplies and so forth and take that and the hill side, Roads I should think running my mind over that ridge and over that portion of it that leads up to Truckee and through into Washington Township, there must be over 2000 miles of roads in that County, and vastly over that, and they are mostly these hill side roads,

graded roads.

Q You have spoken of a rail road? A Yes sir.

Q. In Nevada County with reference to this wash — Describe it particularly?

A The Railroad is constructed from Nevada City to Colfax. Colfax is in Placer County. It is about 22 miles long and a good portion of it runs on the sides of the mountains, a side hill road, a good portion of it passes through more level country but a large proportion of it is a graded road and a great deal of the material which came from that road has run off and is washed into the rivers.

Q You speak of it as a mining rail road? A Yes sir.

Q A railroad constructed for mining? A Yes sir. Generally the stock holders of that road are the gentlemen — The heavy stockholders

10173

of the road are miners and the road was constructed for the purpose of conveying to Nevada City the mining supplies for the ridge and other places in the mountains, and the largest machinery and so forth for quartz mines.

2. Does its value depend upon the mining industry?

A Almost altogether, sir.

2 Compare the wash outside of the mining wash between 1875 and the present time and state the result?

A. That is what I do say. I stated it.

2 This is the natural wash compared with the wash since 1875?

A Oh, It was 10 pr ct. I should think since 1875

2 How much greater?

A 10 per cent

2 Greater than what greater than the mining wash — do you mean 10 per cent or ten times greater?

A 10 times greater — that is

10174

prior to 1870 with the mining wash since 1870

Q That is not the question, between 1870 and the present time?

A I states that it was 10 times greater in my estimation than the mining wash since 1870 outside of mining — the hill side washing

Mr Belcher Do we understand you to say that since 1870 the wash from natural causes outside of mining has been 10 times greater than that from mining?

A Nosir, that was not what I intended to say.

Q That is what we want to find out?

A I understood the question asked me, what the wash outside of the mining was prior to 1870, in comparison to that since 1870, that is with the mining wash since 1870. I say that the wash from natural sources prior to 1870 was fourteen

1870

greater than the mining wash since 1875, that is what I said

Mr Hart. That takes in ten hundred thousand years I suppose if the mountains excavated that long.

Mr Dibble What effect will the mining removal of the material remaining in the gravel channel, dense and removable, have upon the navigability of the Feather and the Sacramento Rivers?

A In my judgment it will not have any. I do not think that anything that is removed up there from the mines at the present time except what is carried in suspension will ever reach the Sacramento River in the years.

Q Why? A Because it is too dense, too heavy, sir, there is no water will move it. The amount of water we have there will

never move it in my estimation

2 What has been the gold production of Nevada County?

A. The gold production of Nevada County has been put at over $200.000.000. I think there is over $3.000.000 that has been taken out from the town in which I live, between that and French Corral, between these 2 places in the mining camps there

2 What amount of gold wealth remains to be earned in Nevada County?

A That includes all mines?

2 Yes sir? A What remains to be earned, I think there is not more than 1/3 of it that has been taken out, over $600.000.000 remains to be earned yet from the mines in that County according to my estimation, over $600.000.000.

2 You are very much under Professor Silliman?

10177

A Well, I can not help it, I have got my own idea in regard to it

2 What is the value of the mining property of Nevada County?

Question objected to and question withdrawn

2 What was the industry of the Commonwealth at the time of its admission into the Union?

A The industry was Mining. The mining industry was the great industry of the Country. That is north of San Francisco. South of that Stock raising was the great industry in that section of the country. I made a visit down in that lower Country as early as the Spring of 1850 and Stock raising appeared to be the great industry in that section

2 What was the amount of the Stock raising popu-

latin at that time compared with the mining population at the time of the admission of the Commonwealth into the Union?

A Well, assuming that there were 100000 people in the State at the time that the State was admitted into the Union, I should probably say that there were 1000 engaged in stock raising, assuming about 10 to 1. I should say about 10 to 1.

Cross-Examination of A. P. Stiger

Mr. Hart In making your estimate of the mining population do you include Sacramento City?

A At that time, yes sir. I include Sacramento

Q Were you including San Francisco?

A A portion of

San Francisco. San Francisco when I first came to this country was a very small city. The first time I saw it, it was small compared with its present size

2 You include what there was of San Francisco at that time, as a part of the mining population?

A Not all, no sir

2 Why do you include the population of Sacramento, as a part of the mining population at that time?

A Because this was a mining camp where the miners received their supplies as well as San Francisco, there was no other business conducted here at the time than that of furnishing miners of boarding house keepers for the purpose of feeding miners that came into the City, it was a mining camp entirely just as much so as if it

had been built upon a time
2 Was it was a mercantile City was it not, at the time?
A Yes sir, some merchandizing was done here at that time 1849 and 1850.
2 The principal business of the City was merchandizing was it not?
A Well, tell me what period you speak of
2 1849? A Well, in 1849 the principal business of the City was not merchandizing at that time, sir. The principal business of the City at that time was boarding house keeping and there were more men to feed than there were people to furnish purchase anything. Boarding house keeping and hotel keeping was the principal business of the City although there were some merchants here?
2 How many mercantile Establishments were there in

the City at that time?

A From my knowledge in regard to them I cannot say that there were but ten. I recollect the Lady Adams house, that was one, but I cannot count up ten if I was put to it

2. Well, there were some mechanics here, some merchants and some boarding house keepers engaged in all ordinary pursuits? A Yes sir, all ordinary pursuits

2. About a City?

A Yes sir, I merchandised a little myself and I was glad to sell out.

2 Were the merchants generally in wholesale or retail business?

A Retail business entirely sir. I do not know of any wholesale establishments. If there were I do not know of it

2 What proportion of the population do you include in your estimate?

A The whole of the merchants in the City at the time I included as parties that were living off the miners.

Q Well, they sold their merchandise to residents of San Francisco, didnt they?

A I do not know but they did, but they sold all mining supplies that reached Marysville, and in this City there were some sold perhaps, there may have been wholesale merchants here; but I did not know them

Q San Francisco does the same thing to day does it not? A Yes sir

Q And for that reason do you say that San Francisco is a City dependant upon the mining region? A Yes sir, at that time.

Q And is now?

A Partially

Q In the same sense?

10183 A Not so extensive, because

there is more agriculture now in the Country than there was at that time. There was no farming above San Francisco that I ever saw in any place until later years

Q Sacramento now supplies the mountains with some goods, does it not?

A Yes sir

Q And in that sense, in the same sense, it is partially a mining city now?

A Yes, but it is not so much dependant on mining as at that time sir,

Q Marysville does the same thing, does it not?

A Marysville was a mining camp that was dependant on the mining industry entirely for its support, from 1850 at the time when it was first surveyed and laid out, up to the time that agriculture became a very extensive industry of the Country

2. Did I understand you to mean that these several cities were engaged in pursuits different from mining and their immediate industry was that which is ordinarily followed by the population of cities, that is, merchandising, hotel keeping and so forth, but that those cities because they supplied the miners with their provisions and clothing were dependent upon miners for their support, that is the sense in which you use it, is it?

A Yes sir, because there was no other industry but mining that supported the cities at that time, there was no farming around here.

2 Would you say that the City of Sacramento at that time is an agricultural city?

A Not altogether, it is not dependent upon agriculture altogether or on mining altogether, but is is both

Q Would you call the citizens of San Francisco a mining or an agricultural population?

A I should say that there were more people in San Francisco to-day that made their money in mines; than there are of those who did not make their money in mines. That is what I say in regard to that.

Q. But in estimating the mining and agricultural population of this State would you include the citizens of San Francisco? A No sir.

Q They depend upon mining and agriculture don't they at this time? A Yes sir, but they do not live in the mining regions of the country.

Q Don't you recognize merchandising, the ordinary pursuits that persons living in cities, as independent pursuits, independent of mining, as mining is of merchandising?

A. To be sure I do, Mr Hart, and I say that they were dependent at that time upon the mining industry for their support.

2 In the same sense all the citizens of the world are dependent on agriculture because they could not live without agriculture, is not that a fact?

A We did live without agriculture in those days. There was a large population in that Country that had to do it, that is without any agriculture of our own State

2. was not the population of the whole world dependant on agriculture in the same sense?

A Well, I have read of places in the world where they grow spontaneously that do not have to have agriculture to raise them. I have seen some of that portion of the Country myself

2 What number of the

mining population of California was composed of residents of these three cities Marysville, Sacramento, and San Francisco at that time, what proportion.

A Of the 2 or 3 thousand people that were in Sacramento at the time of the flood that I speak of.

Q I see you do not understand my question. What proportion of what you estimate to be a mining population, what proportion of that mining population, resided in the cities of Sacramento, San Francisco & Marysville?

A In 1849?

Q Yes sir

A Well, I came through on the 25th of November 1849 and there was not any person living there except about 10 people in an adobe house.

Q Make it 1850 then?

A What proportion of the population of Marysville

that way there in 1850 were mining population?

2 Now, what proportion of the number which you estimate to be the mining population of California resided in San Francisco, Sacramento and Marysville, what proportion of that population were actually resident in those three cities?

A I do not suppose there was any in the way you put your question. They could not be if they resided in Sacramento and Marysville, they could not be residents of the mining region at all because they were outside of it.

2 But you said in estimating the mining population and making a comparison between the mining and stock raising population you included in the mining population the City of Sacramento, a portion of San Francisco, and the City of Marysville? Also in

2 You said that in making an estimate of the mining population, you included in the mining population the City of Sacramento, a portion of San Francisco and the City of Marysville?

A. Yes.

2. Now, what proportion of the mining population, as thus estimated by you, actually resided in the Cities of Sacramento, San Francisco and Marysville?

A. I calculated the whole twenty-five thousand that were in the City of Sacramento at that time as miners, because they came here to mine and they lived on the mining interests of the country and I called them miners for that reason. I suppose that all the white population, all the Americans that came out to the City of San ~~Francisco~~ Francisco in 1849 came to this Coast for the purpose of mining or trading with miners and, and that the mining industry brought

them here; but since then large industries have sprung up such as mechanics — mechanical works, manufacturing establishments which are supported by the mining industry of the country, not only of this State but of Nevada and Oregon and other States. There are foundries which manufacture machinery for quartz mines.

Q. You calculated that the foundrymen are a portion of the mining population?

A. They are dependent on the mining population for support.

Q. And you say when you first went up or came down the Feather River in 1849 — Understood you that the Feather was highly colored and the Sacramento slightly?

A. Yes.

Q. The coloring was from mining?

A. Yes —

Q. (Cont'g.) Did you notice at that time the junction of the

rivers, that is the Feather and the Sacramento at Fremont?
A. Yes, I did.
Q. What was the difference in color between the Sacramento and the Feather where they met, their junction?
A. The Sacramento above Fremont was a very clear, nice stream, pure water — pure limpid stream, and the junction with the Feather River, it was colored, not as highly colored though as the Feather River.
Q. It was colored with the water that came from the Feather River?
A. Yes.
Q. And of course it was not so muddy, because there was more water in the river than there was in the Feather which mixed with it?
A. Yes, I presume that was the cause of it.
Q. Could you notice the line of demarkation or distinction between the waters of the two

rivers where they came together and joined, or was there a complete mixture?

A. Yes, I noticed it.

Q. How far down the river could you notice it?

A. I do not remember how far down, but I notice the bank on that side of the river, it ran very pure and clear and then on the other side, as we came down in a boat, it was colored and I mentioned that fact that the Feather River had not yet joined with the whole Sacramento River.

Q. Have you had occasion to notice since that time at the same place — where the junction is of the two rivers, that fact?

A. Yes.

Q. How many times?

A. I have travelled up and down the river since 1850, up and down between this place and Marysville, per-

haps one hundred times.
Q. Up to about how late a date did you travel on the boats up and down the river?
A. Between here and Marysville, about three years ago.
Q. Did you notice the same distinction between the waters of the two rivers?
A. No sir I do not recollect that I did. I do not know that I paid any attention to it at that time. I do not remember.
Q. You remember whether you looked to see?
A. No sir.
Q. Did you, when you did look at it notice the same distinction either in the color of the waters coming from the upper Sacramento?
A. It was not so clear as it had been formerly, but I did not notice the distinction at the place where the Feather River joined in. The Feather River water came down to

a considerable distance before it spread out over the whole Sacramento River, but it was clearer just below the junction than the water of the Feather River?

Q. Do you know whether or not the Sacramento River is now at this and has been for years, so clear that you could see fish six feet below the surface above its junction with the Feather River?

A. No sir, I do not know it. If it is so, it is a fact that I was not aware of. I never saw the fish myself. I know that I came down on a whale boat from Marysville to this place and landed right here at the foot of K street.

Q. I am speaking of the Sacramento River above its junction with the Feather. Have you ever passed over on that route?

A. I have never been up the

river there — I have never been up the Sacramento River above its junction with the Feather. I have been at Colusa though and I have come down the Sacramento River some little distance, but I never came down as low as the junction.

2. Did you see the Feather River, before mining had been commenced?

A. No sir, I did not.

2. How many steamers — not steamers but ships did you see in the river at the Sacramento in 1849, when you were here?

A. That I can not tell you, Mr. Hart. I saw several steamships and sail-boats and I would call them schooners, some of them.

2. Some of them and some ships?

A. Yes some — I believe there were one or two steamers running on the river. I know there was steamers running

here between Marysville, because I went up on them.
Q. Do you know the difference between a ~~sta~~ full rigged ship and a schooner or brig?
A. Yes sir, I think I do.
Q. Did you see any full rigged ships?
A. I think I saw what I would call a full rigged brig or full rigged ship — a three masted ship.
Q. What is the difference between a ship and a brig or a schooner?
A. A schooner I think has two masts and a ship has three masts and top-sails. I do not know as I can describe them. I am not nautical enough to give a description of them. I think I could tell them if I should see them; which was a ship and which was a brig and which was a schooner.
Q. How far up the river did

these ships go then?
A. I never saw any go further than this city.
Q. There were steamboats here?
A. Steamboats, yes.
Q. There was a boat that you spoke of as being a prison boat?
A. Yes; The prison brig. That was the name that it was called, the "Prison Brig".
Q. Why was it called that?
A. Because they had not then any jails in this country at that time, and they used it for the purpose of confining such men as it was necessary to put in confinement, in jails; men who had committed depredations against society or morality or robbed and stole or pilfered.
Q. To whom did that brig belong?
A. To the City, I believe.
Q. Where was it located?
A. Down nearly opposite the water works, the old waterworks

in this city.
Q. Above or below that?
A. I think a little below — a little below.
Q. How much do you think below?
A. Not more than the length of the ship itself, if it was that much. I do not recollect. If my memory serves me it was a little below the waterworks, but out in the river.
Q. How far from the old mouth of the American River?
A. It was below the old mouth of the American River.
Q. You do not remember how far?
A. No sir. I can not tell; I do not recollect.
Q. Had the city waterworks then been constructed?
A. No sir.
Q. At that point there is a very large deep sandbar at this time, or have you noticed?
A. I have not noticed sir. I have not been down there since it has been there.
Q. You spoke of a graveyard, in

your testimony, is that the present City Cemetary?

A. No sir.

Q. On this side of the City Cemetery and within the present limits of the City of Sacramento?

A. Just let me explain. There were two graveyards, one, the present cemetery as I understand it, that is below W street and a graveyard that we went to bury this man was this side of W street. There were two old graveyards and one of these graveyards was at the present City Cemetery or close to it, in close proximity to it, and the other was this side of it, between W and V. I think.

Q. How far off from the river?

A. It must be in the line now, I should judge of Tenth street or between Tenth and Eleventh streets.

Q. That is very much further out - to the east than the present cemetery.

A. That is my recollection of it.

10200

It was a little further east than the present cemetery. I might be mistaken about it being as far out as Tenth. But I started from my house, on K street and near the corner of 6th. and me started in a south east direction for the grave-yard and it might be that it was on the line of Ninth street; but, if I was going to guess at it now, I would say that it was on about Tenth Street.

2. Did you ever investigate to ascertain ~~from~~ what that black stuff was that you said was so nauseating?

A. No sir; it made me too sick; I did not want to know what it was.

2. Was it something that came from the city here?

A. I think it came from - it must have come from the city; I do not know where else it could have come from. They used this mound, this Indian mound, I speak of

and I have seen 100 people at a time behind that mound using it as a privy; and I think it was material that came from that direction, yet I think it came from in the city. There were no privy buildings in the city at that time of any note and most everybody went behind this mound and most everybody here then had the diarrhea and dysentery.

Q. That was in those early days.

A. That was in 1849.

Q. You said that the water in the city was perfectly still, and that there was no current here?

A. No sir, I did not say perfectly still; I said there was apparently no current until after the waters below = after the river had been open as the gorge or whatever it was, had opened and then there was a current. I have my theory in regard to it, that the water was obstructed and it was therefore almost

perfectly still; and there was no current until after the water was opened out below and then there a current in that direction. It run down in that direction. It went towards R street.

Q. It run out through the basin?

A. Yes, through the basin. The river had been disgorged below and as a matter of course the waters commenced receding.

Q. Do you know of any point outside of the immediate bed of the river — the current of the river, where there was any considerable current in the water?

A. Yes; I heard of it and I saw it too.

Q. Where? A. On Third street.

Q. Where was the motion to?

A. It took down in that direction, <pointing.>

Q. It run in the city, did it not? A. You mean running in the city?

Q. Yes? A. I meant that the current was running out.

the first waters that came in the city came directly in ~~through~~ the slough or a depression in the ground, that I might call a ravine that passed almost under my house, on one side of my house and the first water that I noticed that came in the city came in from the American River almost under my house. That is the first I observed. It had not got out to the street yet. It was in this depression in front of my building or in this ravine but it did not get under my house. It was between my house and another man's house, and the first water that reached the street came through that ravine close to my house.

Did you know of my place, when, during the high stage of water or before it had commenced receding - when there was any considerable current outside of the river?

A Yes sir.

2. Then if I understand you, the water simply rose out from the river banks and spread over the basin and remained until the water commenced receding and it went away again?

A. Yes. You understand me exactly right.

2. How could you estimate, under those circumstances as to the amount of the carrying capacity that would be required in the river to have prevented all this water from spreading over its banks and coming to the basin?

A. From the first quantity of water that was spread over the country, the depth of it, the height of it, the breadth of it in comparison with the power of the river to carry it at that time.

2. Suppose you were to take a large bank and construct that around the County of Sacramento, and turn the American into it, and during ordinary high season, how long do you think it would take that river

10205

to fill ten feet deep — the entire surface of Sacramento County — a very short time, would it not?

A. A very short time; it would not take it very long.

Q. So that this river is running over, it would take very long to fill this basin?

A. It was not this river that done all the work. The Sacramento River, the Feather River, the Yuba Rivers — and there are a great number of them; there are three Yuba Rivers, and the Sacramento River and its tributaries, and the Feather River — all these were high together and each of them assisted in making this immense flood of water.

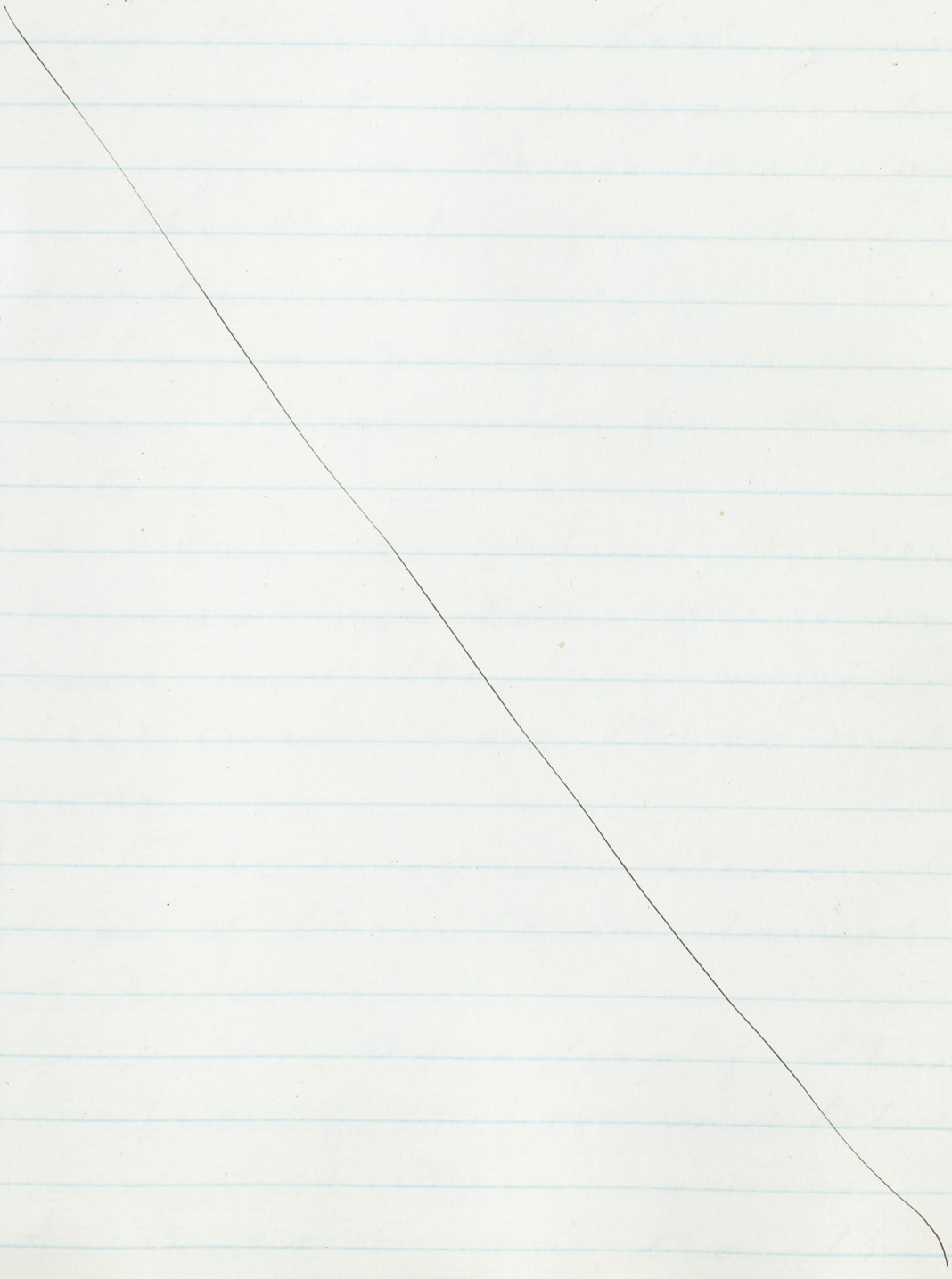
Q. But they do that all the time?

A. Yes the rivers run over their banks and fill up the basins in the city up from here to Marysville and when they get to this level

and can not get up any further, they stand at a dead level, of course.
Q. That is not of infrequent occurrence in this State?
A. These floods?
Q. The filling up of the tules and basins along the banks of the rivers?
A. It has not been of frequent occurrence, since I have been here; I have seen many floods.
Q. When you said that the water was from foothills to foothills —
A. (Ontg.) It was as far as my eye could reach.
Q. Your eyes could not reach from the foothills to the foothills?
A. I could see the mountains. It looked to me as if the water went to the furthest extremity, sir.
Q. You could not see, if you were on the top of the State Capitol — you could not

till whether the water reached the mountains or not now?

Ans sir, but as far as my eye could reach it was one vast sea of water. That was my language, sir, in reply to that question and I stick to it now.



Q But from foot Hills to foot Hills?
A As far as my observation it was from foot hills to foot hills.
Q As far as you could see you could see water?
A Yes
Q That could not have been over three miles taking it any way from Sacramento. Can you see three miles our in the country from here?
A I cannot now.
Q Could you then see more than three miles from Sacramento?
A I can see where the Sierra Nevada Mountains are our east and they are a good deal more than three miles away.
Q There was no water on the tops of those mountains?
A No sir.
Q I am speaking of the surface of the ground between here and there
A I could see more than three

miles from here.
Q Could you see any water there
A I think I did.
Q You think you could see water more than three miles from here?
A As far as my eyes would reach I could see water.
Q Speaking of the town of Yuba City in the County of Sutter and west of Marysville a person could not see from there towards the Buttes and tell whether there was water there?
A I could not now. My eyesight would not reach a mile sir.
Q At that time I am speaking of
A If I was standing in the City of Marysville where I could see the Buttes - in a position where I could see the Buttes I could see the ground between Marysville and the Buttes covered with water at least I could at that time.

Q Were there not a very great many trees then large forrest and large Oak trees between the Butte Mountains and Oroville City ?

A No sir there were not. On the Contrary whatever trees there were exceedingly scattered

Q How far apart would you say ?

A From 20 to 30 feet and sometimes more. They were low bushy Oak trees there were no pines

Q How far can you see through a forrest of Oak trees 30 feet apart ?

A There was not a forrest here and there might be a tree and there was a tree 30 feet from and another tree and so. There is no dense forrest there.

Q Put them in any shape you want ?

A It is all open land and you could look through them. It was all what I

would call Prarie land.
between that and the Buttes
there was no forests at all
There were some Sycamore
trees or Willow trees or what-
ever you please to term them
growing along the edge of
the Yuba River but they did
not hide the view of the Buttes.
Q Could you see the foot of
the Buttes?
A What I believed to be
the foot of the Buttes.
Q Could you stand in the
town of Yuba City for instance
at that time and see half
a mile east from there —
see the ground?
A No sir.
Q I mean Can anybody see
it?
A I do not know sir.
Q Is not the lay of the Country
such that you could not see
— I will put it outside of a
mile of Yuba City?
A I do not know from Yuba
City

Q That is North of Marysville?
A That is west of Marysville.
I never took any observation
from Yuba City towards the
Buttes but I have stood in
Marysville and looked at the
Buttes lots of times.
Q At that time Marysville
was much higher than Yuba
City?
A I have always looked at
Marysville - a portion of Ma-
rysville as being on higher
ground than Yuba City and
a portion of Marysville is
much lower than Yuba City.
Q Have they not had to
grade Marysville at least
in some places 15 feet
higher than it formerly was
while Yuba City stands on the
original banks of the River
and has not been flooded?
A Take D Street in Marysville
I do not think that has
been graded more than two
feet. I think that was graded
by the material being hauled

from the River. They haul the debris from the River and put it on the streets for the purpose of making a hard pan on them. The houses have not been raised I think.

Q So you know where Judge Keysers house is located?

A I presume I do if it is the one that Mr Hanson used to live in.

Q You know there is a ridge running up the River?

A Yes.

Q So you know the length of that ridge?

A No sir.

Q It extends at least up to the bridge does it not?

A Yes. There has been a levee constructed along there since. I do not know how much of a levee is there over the place where Hanson used to live is on high ground over I think the ridge extended nearer to the bridge

10214 Q You think that you could

Stand in Marysville and tell whether or not there was water covering the plains between Marysville and the Buttes A I could at that time. I think if my attention was called to it I could

Q What is the difference between the number of persons in Nevada County now engaged in mining - actually engaged in mining and those who were actually engaged in mining in 1849-50-51-52-53?

A Well I made an estimate of 1851 and 52 of Nevada County. Recollect Mr Hart in Nevada County - it was only made Nevada County in 1853. It was a part of Yuba County previous to that time - It was a part of Yuba County and so was Sierra County a part of Yuba County those three Counties were combined into one

Q I am speaking of the territory that now composes Nevada

County }
A There is less population in Nevada County today than there was in 1850-51
Q How much less }
A I should say perhaps 20 per cent - 25 per cent or 30 per cent probably 50 per cent less.
Q You think that there are in fact half as many persons engaged in mining
A Actually Mining }
Q Yes
A No sir there is not. There is over 50 per cent less actually engaged in mining than there were at the time I speak of 1851-52 and 53
Q So you think there are one fourth as many now actually engaged in mining as there were then }
A I think not. I do not think there are more than one fourth as many actually engaged in mining unless you include the Chinese population

of the Country.
Q It will not do to ignore them?
A Then I think there are more than one fourth engaged in it because there is a large population along the Rivers now and have been since the injuctions were got out — they were upon the Rivers and worked. There must be a thousand Chinese working along the Rivers and have been since the injunctions were served.
Q What is the nature of the material contained in the Rivers that was mined by the early miners?
A Sands and gravel was the material and rock.
Q A great deal of the material was composed of gravel was it not a large proportion of it?
A Well where we mined originally — where I mined originally there was about

two feet of sand, while sand
before I got to the gravel
And then I would find
about three or four feet
of gravel before I struck
the bed rock.
Q That was about twice
as much gravel as sand
A Yes about as much
Q How many feet of sand
did you say?
A about two feet of sand
before I struck the gravel
Q And then four feet of
gravel
A Three or four feet of
gravel
Q A very large amount of
that gravel was composed of
very heavy boulders that
had been washed down from
the mountain sides was it
not?
A I do not know where they
came from we found a good
many boulders in going
down through the ground
10288 We found a good many boulders

Some as large as my two fist
Cobbles not boulders. Some
were as large as one fist
And some as large as my
head.
O And some would weigh
a ton there?
A There were some boulders
but they were generally higher
upon the bank.
O They were in the River
beds.
A I found them in the River
beds but I do not believe
I found any on the bars
of that size while I was
mining.
O The bars you mention
were along the Margins of
the River?
A Yes
O Now in the River there
were very many large boulders
over which the water ran?
A Yes. they were so in places
that we Could step across
the River from one to the
Other —

14219

Q That is a thing that is common with mountain streams
A Yes in this State.
Q You say that River mining mostly ceased because the hydraulic miners put there material in the River and it was swept down over them
A Yes. The first material that came from Hill mining was light material, gravel, and sand, and stuff that swept down the Rivers over these mines, over the River beds that were being mined by these gentlemen or who were engaged in mining in the beds or in the River banks.
Q Of the material that was in the top stratum after taking off the immediate surface, that is after taking off the loam a portion of it is what you call cement, a Yellow Cement like this was is not (pointing)
A Yes that is about the

Kind of material but is not the same color as that we have up there. Ours is of a more reddish cast and this is yellow. This is more like the top soil (pointing) there is some cement or blue gravel like that (pointing) this is blue gravel.

Q You say you find cement and blue gravel. This cement is to some extent air slacked

A Yes it is slacked but it is pretty much like the material we have there

Q And this material you find under the loam in the top surface of the soil (pointing)

A The material we have up there is heavier than this There is a good deal of it heavier than this.

Q Some of it also is composed of heavy rocks - boulders and rocks the size of your head down to the size of

(022)

Your fist ?
A Yes, These rocks run in about equal proportions down to the bed rock in some places
Q Some places they are bigger than they are in others ?
A Yes
Q And the difference that you find in these River Channels is the difference in the Compactness of this Cement that holds the rocks together is not that a fact ?
A Yes it is in the Compactness as a matter of Course, The stuff above this Cement was loose and soft and a little stream of water would wash it down while upon this Cement you can play upon it a whole day with a five inch stream and make no impression on it.
Q That Cement is harder as you went down towards the bed rock until you come down to where it is as hard as this is.

10222

A Yes
Q This is at the commencement of the Cement (pointing) and this was at the end of it down towards the bed rock (pointing) ?
A Yes
Q Is that not a fact Judge
A I believe it is a fact.
Q And the difference in the material consisted mostly in the compactness in which the boulders which existed there in the Channel - the difference in compactness with which they are held together Cemented ?
A Well yes.
Q Is is not a fact that in the early washings that is the washings after they got down below the loam and get down into this stuff into this blue gravel Cemented is it not a fact that all through the bank and all through the different strata you found rocks of all sizes ?

10223

A No sir, I did not find them above this Cement (pointing) but from there down I found rocks not of all sizes but I found rocks of Considerable size but more at the bottom than I found mixed in the Cement - at the Cement next to the bed rock.

Q So you mean to say that the amount of heavy material increases, that is not the amount of heavy material but the amount of rock increases as you go down towards the bed rock?

A No sir I do not mean to say that, I say that a larger proportion of the rock that was found with this Cement is found close to the bed rock, It is not mixed in with the Cement as you go down because this Cement is all Cemented together as hard rock and it has to be blasted. It is broken up

in Chunks of this size (pointing) and you would have to put a blast in this (pointing) to break it up. It is so hard that water will not penetrate it. Water will not melt it - will not dissolve it
Q This Cement Contains gold?
A Gold is found in Cement.
Q It is found in this blue gravel in large quantities?
A It is supposed to be and it is looked upon as the most valuable mining but it has to be broken up. It has to be broken to pieces to get the gold out.
Q So I understand you to say that the most valuable mining is supposed to be in this Cement?
A Not altogether because there is a stratum of bed rock underneath the Cement that is supposed to be the richest part of the mine and they have to go down to the bed rock and they want to get

all the gold that is in the Cement and therefore they have to blast it to pieces in order to get it through the sluices.

Q And the only way to get it out is to blast it up?

A Yes pulverize it. Some of the miners have mills that they use for that purpose.

Q Mining is never conducted by any person in this Cement Unless it is pulverized?

A Yes to get the gold out.

Q Did you ever see any hydraulic mining where they did not pulverize it?

A I have never seen any where they did not attempt to pulverize it. I have seen a great many where they did not pulverize it up all. Some of it went into the sluices and into the dumps. I have seen chunks bigger than my two fists that never was pulverized at all.

Q After that Cement is

subjected to atmospheric influences it becomes what you would call air slacked does it not ?
A Yes I am told that it does
Q And then it pulverizes itself ?
A Yes but it is too late for the miners then. It is Our on the dumps and it goes into the River and the River miners take it. It is too late for the hydraulic miners as you term them to pick it up.
Q If this blue gravel is pulverized what does it form what is it then ?
A I suppose you would term it gravel then. It is blue gravel then.
Q Is it not sand ?
A Some of it is sand
Q Cement is sand after it is pulverized ?
A Will you tell me that rock when it is pulverized is is sand too ?

Q Yes if it is pulverized enough. When you pulverize this to get the gold out of it, grind it up, these small fibers hanging here are pieces of sand - each one of them so that it becomes pure sand. You can see the sand in there. ?

A In my estimation it is more of rock than sand. it is not sand stone sir. Of course if you take Quartz rock and pulverize it you would make sand of it.

Q I will ask you whether or not in your estimation that blue cement is sand Cemented together by the extreme pressure of the mountain above it. It is driven together and kept there until it forms itself into a hard substance when its moisture is gone from it ?

A That has not been my theory of it.

10298

Q What do you think forms that Blue Cement?
A I think Nature forms it but I cannot tell you the works of Nature by which it is produced. I am no Chemist
Q Did you not speak of this as an old River Channel?
A no sir Nobody asked me any such a question. No body asked me any question about this old River Channel.
Q You have seen a great deal of this Blue Cement after it is pulverized?
A no sir.
Q you do not know how fine it is?
A no sir.
Q Do you know whether it is a light material after it has been pulverized?
A That that I have found at the end of sluices is not a light material
Q Rocks you mean
A no sir. This Cement

after it has gone to the dumps I have found it in pieces as big as my fist.

Q I mean after it is pulverized?

A I have never seen any of it pulverized.

Q You do not know?

A Do not know what?

Q What proportion of one of those banks composed of this blue cement or gravel is cement and what portion is gravel?

A Well sir take the American mine near San Juan the bank is about 130- from 130 to 150 feet in height. The top soil being washed off the cement is from 10 to 15 feet from the bed rock and the upper gravel is from ten to 15 feet in depth and the balance is light gravel above it.

Q When you say gravel you mean small pebbles and

Sand }
A Yes that is what I mean exactly
Q Speaking of the Cement itself taking this specimen what proportion of it would you say was Cement and what proportion of it would you say was rock, or take any gravel that you want to, I ask you what amount is Cement and what amount is rock in material of that kind independant of the other gravel above it }
A I would call that all Cement sir, I would not call any portion of that rock. I would call that all Cement. That that is in the American Mine I speak of is all Cement
Q They pulverize it all as nearly as they can }
A Yes by blasting it up and breaking it up into pieces and turning it into the sluices.
Q And some of them use sledges

And Mills?
A Yes they hammer it up and some of them have Mills and they grind it.
Q That is done to pulverize it?
A Yes
Q If they should break it up into small pieces as big as your fist regularly they would not get one hundreth part of the gold ours of it would they?
A I do not think they would.
Q How many feet above that blue cement or extremely hard cement which you say is 15 feet deep - how many feet above that do you think there is of what you would call gravel before reaching the top soil?
A I said that the gravel bank from the bed rock to the top of the soil had been taken off say from 130 to 150 feet in depth where they are washing now and 15 feet of that was blue cement

and the balance is gravel — light gravel.
Q Something like this (pointing)
A Yes like this stuff, not like this (pointing), This is blue cement a portion of it
Q Is that the general character of the mines up there
A Of the particular mine that I speak of
Q I mean the mines generally?
A No sir where the North Bloomfield are mining it varies from that which I have described.
Q So you find much of that material in the mines (pointing)
A Is that ochre, There is some ochre but I do not know how much there is there
Q That will almost float on the surface without being dissolved will it not?
A I should think it would but there is not much of it found in our section.

Q That is what you call decomposed rock (showing)
A No sir.
Q What is that stuff?
A That is ochre too I guess
Q And this is what you call decomposed rock is it not (showing)
A Yes that is decomposed rock
Q Is there much of that there
A No sir not a great deal of that not of the decomposed rock up there
Q That is very light
A Yes.
Q That would float on the surface of the water?
A I do not know as it would but it would be held in suspension.
Q Now you say that at Shady Creek from hydraulic mining that has been going on that it has filled up the Creek 30 feet in depth?
A Yes.
Q And drove the little miners out? A Yes.

Q When was that filling made
A From 1856 up to 1862
Q Did they then reach the
bottom stratum?
A No sir it was done with
this top soil. They washed
off more of that very light
material they washed it from
the hill sides at Cherokee
and above it at Kenebeck Hill
Kenebeck Hill is the mine
that I was trying to think
of today
Q And the tailings have
remained there ever since
A They have been washing
into it constantly since and
it still remains filled up.
Q It has always been filled
up?
A It remains filled up sir
Q Is it filled up now more
than it was then?
A Yes more.
Q How much more?
A Ten or 15 feet more
Q Has there been any exten-
sive mining there since?

A Recollect Mr Hart that I said that it covered up the bridge and that was 20 feet above the surface, I do not mean that it was all done at one time, I will state that it is filled up now 10 or 15 feet over that bridge It has been filling Constantly, Now however they have ceased washing there and it remains almost in Statu-quo.

Q I understood you to say in your evidence that it had filled up 30 feet and it had remained there ever since?

A Yes some of the filling has remained there ever since, It has remained filled up ever since.

Q How extensive has been the mining on Shady Creek since that time

A There has not been any in the Creek that I know of.

Q Since 1856

A No sir

Q Since 1850?

A Not since these fellows were driven out there.

Q I mean how extensive has been the hydraulic mining along the banks of Shady Creek? A Above where it empties into Shady Creek?

A Yes sir.

A Well sir there is a mine located up there just above the Columbia still called the Kennebec mine that is the name of it, and that mine has been worked very extensively since up to two years ago — two or three years ago. That is the mine that belongs to Williams Nichols and others. I think that is the name. It is a Corporation; the name is the Kennebec Hill mine.

Q How deep have they emptied that mine?

A From the surface to the place where they run an immense tunnel in there I should judge 150 feet pro

Q How many acres?

A oh 40 or 50

Q 40 or 50 acres 100 feet deep? A not all the way, now as to me how deep they worked it and I told you

Q What would be about the average depth of that 50 acres?

A I suppose 50 feet probably

Q Now where has all that material gone?

A It went down the Shady Creek and filled it up, that is where it came from

Q Is there enough in Shady Creek to hold

50 acres 80 feet deep?
A I suppose some of it might pass further down, the lighter material some of it was carried in suspension and that is the top dirt and gravel, the most of the material was top dirt, a part of it was debris that filled up Shady Creek
Q How long is Shady Creek? A Several miles, I do not know
Q About what would you say the length of the creek is from the point where this mining was done, to its mouth?
A I cannot tell you for I never travelled the length of it. I do not know
Q Would you say it was ten miles in length?
A I should say it was a great deal more.

Q Make a general estimate about?

A I do not know. I showed them perhaps below this mine 20 miles

Q How wide and deep is the creek? A The bridge over Shady Creek at the point I speak of as being filled up 30 feet was about 60 feet across it and as you go up the banks the banks widen out and instead of being 60 feet now it is over 300 feet wide in places

Q Has there been any other extensive mining along the banks of this Creek? A Since then?

Q Yes sir

A There has been no mining done along the banks of the creek since that time because the debris that came down and sand and

stuff covered it up so deep

Q I mean by drudic mining that tails into the Creek?

A Yes sir up to the Columbia Hill mines mining has been done there

Q How much has been done there? A That is where the Kennebec mine is located and the Eureka Lukes, Co's celebrated mine and there have been acres and acres right at Columbia Hill as it is termed, it has been washed off, the top surface has been washed off and washed down in the Creek

Q How many thousand acres have been washed along that creek?

A Not any thousand acres

Q How many do you think? A There was not a thousand

Q Not a thousand? How many acres would you say along the creek? A I do not think a thousand.

Q Do you think 600? A No I do not think 600 - I think there was perhaps one 50 acres washed off

Q Along the creek? A At most one particular place

Q No, I speak of the mining generally, I want to get at the general tailing into the creek? A Well sir I believe there is one 100 acres of ground has been washed, the top surface

Q Over 100 acres? A yes sir

Q Do you call that

extensive mining?

A well I call that pretty heavy mining for top ground up there.

Q well, how deep have they washed that 100 acres? A well I said at the Cherokee that they never had any tunnel there, they wash down into the Creek they had no outlet, they had no tunnels and did not construct any tunnels they washed the top surface right into this Creek.

Q How much of that is mined through tunnels- how deep? A no place.

Q Now this Shady Creek? A I told you that the Kennebec mined had mined on an average 80 feet deep of their mine.

Q Now I want to get

at the other mines?

A The other mines had no tunnels. They washed their material off into this Creek where they had their sluices to run it down

Q They never have had any tunnels there?

A Not above Cherokee

Q At Columbia Hill?

A yes sir, they had plenty of tunnels there

Q. Down on that Creek?

A. yes sir

Q. How deep was that? A. the Cherokee tunnel?

Q How deep was their washings? A 80 or 100 feet

Q. How many acres?

A I'll there — well I did not measure. I cannot tell you but it was a large extensive territory, the top has been washed off the hills washed off the

top of the ground I do not know but 100 acres perhaps right there, the top has been washed off and left this bottom soil, the heavy material in the bottom remaining yet to be washed, they are not washing that now. That belongs to the Eureka Lode Co.

Mr McMurray is the owner of considerable of it

Q I want your own estimate of the number of acres that have been washed off at Columbia still into this Shady Creek?

A The surface? That is the way I figure it

Q I want to know what is washed away in any way?

A The surface of 100 acres of land has been washed off

Q And to about what depth? A Oh 4 or 5 feet and some places 50 feet and some places less

Q And some places more? A well take this Kennebec Still mine

Q That is not the Columbia Still is it?

A It is right close into the Columbia Still. The Columbia Still is just this side on the Creek. However I must tell you, there are two Creeks that carry a portion of the Kennebec Still mine one called Clear Creek that runs south and the other running in a Westerly direction, and the Kennebec Still emptied into both of these Creeks and the material that came down from the Kennebec Still mine

and went into this Creek and filled it up; but it had another outlet in another direction called the Clear Creek outlet and the Columbia still have this Clear Creek outlet also and that has filled up. I know I owned an interest in some bottom ground there and they filled it up about 20 or 25 feet over my sluices that I had in there and destroyed all my works and filled up my sluices over 20 or 25 feet

Q That is off the question again you have got off the Kennebec Hill

A I have got to give you the history of the County

Q What I want to get at is the number of acres that have been mined

into Shady Creek that is what Dwant to get at A There are no number of acres that have been mined on Shady Creek it is above Shady Creek on the hill sides

Q level tailing into Shady Creek? A Stold you 100 acres on the hill tops

Q In all the mines?

A In these mines that I am speaking of, the Kennebec Still mine and the Wills mine on the other side that empty tailings into both these creeks Clear Creek and Shady Creek

Q The Kennebec Stills and the Wills mines have mined 100 acres?

A And the Cherokee

Q Is the Cherokee included in the 100 acres?

A yes sir all the

mines above are included in the 100 acres of land; it is all guess work in regard to the number of acres for I never looked at it for the purpose of ascertaining that fact

Q If you were to make as clear an estimate as you could wouldn't you say that there had been 500 acres mined where the surface had been taken off to a greater or less depth along the banks or near the banks of Shady Creek, that is of the mines that lie on Shady Creek from one end to another

Ans Sir I would not

Q You would not say there were 500 acres.

Ans Sir I do not believe it. I do not believe there is that much

but I do not know. There might be 500 acres but I do not think there is. That is all about it. I think there is 100 acres, that is a large estimate for the amount of top surface that has been taken off

Q Who were these little miners who had a fuss and very near a law suit about being covered up up there on Shady Creek?

A There was a man by the name of Johnson who was a brother in law of Robert McMurray, he along with some other parties whose names I do not remember but they came to me and consulted me about it and wanted me to prosecute these miners above for covering up their claims below

and they told me they had located their claims and worked them for years before the hydraulic miners above had taken up their claims

Q Did you see the hydraulic miners above and protest against it? What did the hydraulic miners say?

A I did. I wrote myself for them, a note to the hydraulic miners and they told me that they might do their best, that they were going to work that claim — I do not know but some lawsuits did grow out of the matter and I think the miners down the Creek lost their case because it had become the custom for everybody to give way to these hydraulic miners

Q The little miners stood but little show in contesting against the large miners there

Mr Belcher The Witness was proceeding to answer when he was interrupted.

The Court <To the Witness> State if you completed your answer?

A yes sir I have completed it when I stated that it had become the custom there for the little miners to give way to these hydraulic miners — I completed it

Mr Lockwalader Q That custom was the result of necessity was it not, where the little miners gave way?

A It was high necessity for the deep hill miners to do just what they did do, to run their debris and tailings

into these streams and cover anybody that might be on these streams and drive them out, it became a high necessity

Q They paid no attention to anybodys rights who happened to be below? A I never knew anyone to protect the rights of the parties below them. Every man takes care of his own property

Q When you speak of the heavy material that you say you do not think has gone 3 miles what heavy material do you refer to? A I speak pit of rocks, the large boulders, the large rock that you spoke of as being in the mine as big as my head and I speak of this heavy material here

<No. 1.> It is softer. That is not broken up in pieces as I have seen it, chunks as big as my fist or less

Q What is the grade of Shady Creek?

A I cannot tell you the grade. It is not a very steep grade

Q It is not over a foot to the mile is it?

A Well I should think it was but I do not know

Q Do you think it will come up to 5 feet to the mile?

A I cannot tell you. I know. I know it won't now. It won't come up to five feet to the mile now

Q The only instance you gave in your examination in chief, A finding material lodged in the stream was

Shady Creek was it not?

A No sir

Q What other instance?

A Below the American mine I do not think I saw any. I was not asked where I found it but it was where the American mine empties into the river now known as the Yuba tunnel Company mine situated at Sebastopol near San Juan. I have been at the river there and I have examined the material that was emptied into the river there

Q What is the grade of the Yuba river at that point?

A I cannot tell you that.

Q Well is that a few feet to the mile?

A Yes sir I should

think it was a few feet to the mile

Q Do you think it is 10 feet to the mile?

A I do not know, no, I do not think it is now because it has been filled up immensely when they run their debris into the river there, they have had to go to work and take it away, shovel it off and get it away the best they could

Q As compared with ordinary mountain streams the Yuba river at that point is very level is it not? A Not very level, five or ten feet to the mile perhaps

Q Originally?

A Yes sir, it is graded off, the water runs off very rapidly but I do not think it is very light grade or very

heavy grade

Q. And the material which that river will not carry is the material which you say is not pulverized, that is composed of large rocks and large pieces of this cement that has not been pulverized?

A I stated I do not think that if that material <Gould No. 2.> got into the Yuba river at the end of the sluices that it would be carried three miles down. This material as a general thing is cement here and dropped into the sluices or dropped into the river at the end of the sluices I do not think it would be carried three miles by the water that ran in it

10257 Q Taking that you

do not think it would, but taking this what do you think about it? <Samples from fould 2 & 3>

A That might be carried further down

Q That would be carried in suspension as long as there was any considerable current would it?

A Yes sir if there was any considerable current it may be carried in suspension but there is no considerable current for that purpose

Q There is not any current in the Yuba river at that point?

A Most all of the water at the Yuba river comes from the sluices. It is brought down from the mines through the ditches and run through the tunnels and carries

the material out, but there is very little water left in the channel because it is taken for mining purposes above

Q What is the velocity of the Yuba river at North San Juan - the water in the Yuba river?

A You will have to go to a scientist to get that. I do not know. The current is not very strong sir

Q Does it run as fast as three miles an hour?

A I do not think it does sir - I do not think it does anything like that.

Q You think it runs as fast as a mile an hour?

A Well sir I should think probably it did, I tell you that I do not know. It is guess work for me, I say probably

it does run a mile an hour but I doubt it very much, it perhaps does.

Q There is a vast difference between that stream and one that runs during Seasons of high water at the rate of 24 miles an hour?

Ayes sir I think so

Q Now that stream runs muddy all through out its entire length from the mining region down to its junction with the Feather river at Marysville during the entire year does it not?

Ayes sir

Q Is it very muddy?

A Pretty muddy

Q Well is it not very muddy? A It is not clear water.

Q But it is very muddy water is it not?

A Well not so muddy down below as it is

just where it empties at the American mine by a good deal

Q It had dropped some of its material?

A It had dropped some of its material going and it becomes more clear as it goes farther down. As it gets down it keeps dropping this material carried in suspension over the rocks and other places and bushes, etc. and in the river and drops a portion of it and becomes more clear as it passes down.

Q This material that it carries in suspension down to Marysville during the summer time is the material that comes from the mines, is it not?

A Yes sir, what is carried in suspension

Q Is material that comes from the mines?

A No, not altogether. There is other material that has gone in there a good deal of this land slide material goes there and there is a good deal of the caving of earth that is carried down there; and a great deal of dust down into the river and a great deal of snow slide that comes down, an immense amount of material.

Q That is in the winter time? I am speaking of the summer. I say the material carried in the summer time down to Marysville is material from the mines? A I presume it is.

Q Do you know by what means you would calculate the amount

of material that water at a given velocity would carry? Ans sir I know nothing about it

Q You do not know anything about that?

Ans sir, nothing about calculating the amount of material that could be carried with a given velocity or a given stream of water? I do not anything about that sir

Q Your statement was that no portion of the material thrown into the water except that which is carried in suspension would go down into the valley?

A yes sir that which is thrown from the mines up in my neighborhood understand me

Q But what would be carried in suspension you do not pretend to

be able to estimate because you do not understand sufficiently the laws of hydraulics?

A yes sir

Q What is a fact is it not? A That is a fact but I do have a theory in regard to this; that the material that has been carried down and filled up the river at Marysville and Feather river and at this place is the material that is washed out of the mines prior to 1862

Q well that is your theory? A Yes sir and I will tell you why I believe it. After the flood of 1853 which filled up quite a number of ranches there in the neighborhood of Marysville and I had occasion frequently to examine the material that came

down the river by that flood of 1853, I walked out sometimes 50 yards and 100 yards out over the sand that had come in there and driven the river to one side and examined that material thoroughly and I never found there a rock as big as my fist at any one time in 1853 among that sand but I did find that fine pebbly stuff that we usually took off our rockers and threw into the channel when we were packing up in the mountains there, I found that that was the rock up in the neighborhood of these bars that I speak of

Q Did you ever rock any finer material than that? < Sample from found No. 27

A No sir we rocked

finer material than that and what was left of the material we rocked through the sieves that we had in the little cradle rocking would be pebbles and stones, stones as big as that and sometimes larger (referring) and sometimes as big as my fist, we would take and throw them off the riddles and the finer stuff would go through the rockers but rock as big as my fist I never found among the sand

Q Where was that?

A That was at Marysville.

Q That is the reason for your theory?

A Yes sir. That that which came down in 1853 was the stuff that was washed at Ousley's Bar above Marysville

Q Did not the flood of 1862 clean out your rivers there?

A This sand drift that was brought down in 1853, no sir, it only added more to it, that is all

Q It did not clean your rivers out at all?

A No sir

Q I mean clear them out? A At Marysville?

Q No not at Marysville I mean at San Juan?

A No sir

Q It did not wash the material down at all? A I do not say but it washed some material down

Q What was it cleaned it out? A It did not clean Shady Creek hardly any portion of it

Q That is a place where the water runs like molasses, very slowly

Torby

down the hillside?

A It did not clean out the Middle Yuba river in front of the American mine, it did not clean it out, it reduced the material there. and washed it a little lower down and that was about all you could see

Q Your water up in your river during seasons of flood and high water don't run like a torrent there but runs slowly?

A You are very much mistaken in regard to it. It would come down like a torrent. It fills up and carries off everything. In 1862 nearly all of the bridges built 15 & 20 feet above the river were carried off, the bridges and everything else, it ran with such a torrent

Q Didn't it clean out the little cobble stones as big as your fist?
A Sent them a little further down that is all
Q How far down did it sweep them?
A I do not think very far
Q Did you see them afterwards so that you could identify them?
A No sir I could not identify them
Q So that this is a mere matter of supposition?
A I told you it was my theory that is all.
Q A theory founded upon what? Founded upon observation
Q Now did you ever in all your crude washing wash out any material that was lighter than that? <referring>
A I do not think I ever washed out any that was

as light as that. I do not think I did.

Q It was all heavier than this? A This material was not found in these mines, that is heavy. That material was not found in the banks of the rivers where I mined.

Q There was no such material as you find in box No. 2?

A This is cement.

Q This is heavier than you found there?

A Yes sir this is heavier than a great deal of the washings we did on the bars where I was - this is heavier.

Q You call that cement air plucked do you?

A A portion of it is.

Q A portion of it is air plucked.

A That is all air plucked.

Q That is a rock that

is not cement at all?

A I said that cement was rock I did not say it was sand, you said it was sand

Q Now is not cement that peculiar substance that holds rocks and pebbles together?

A yes sir that is what it is

Q Now this is the rock and the other is the cement which holds it together is not that so?

A yes sir that is so

Q Do that cement has become air plucked and disintegrated while the rock continues to hold its compact and heavy condition Now in speaking of the carrying power of the Yuba river do you know whether or not the Yuba river sometimes throws rocks up on the Yuba river bridge?

A I never saw it and never heard of it.

Q You never heard of anything of the kind?

ANS Sir

Q These undercurrents that you speak of, the object of the under current is, as I understand it to further pulverize and extract the gold is it that is pulverize the substance, the material and extract the gold?

A I will explain what I conceive and what I understand to be the use of them. After the stuff has passed into the sluices and down through the tunnels the course material is separated from the fine and the fine material runs through the undercurrents.

Q That results in further pulverizing the finer

material does it not?
A That is the intention
Q That is the object?
A Yes sir and it does it to some extent
Q If it did not do it they could not get any gold? A It does it to some extent
Q So the heavy material that you speak of first goes into the stream?
A Yes sir
Q The other material goes through the under currents and drops over on top? A Yes sir
Q I want to ask you one other question in relation to this heavy material. Summed up your testimony in relation to the material that will go down is that some material that is composed of large boulders as big as my head and from

that size down to my first is too heavy for the current of the Yuba river to carry at its ordinary stages?

A Not any great distance

Q But that lighter material over there was, or a great proportion of it in lot 2 and 3 will be carried down the stream a very much greater distance but how far you do not know?

A Yes sir that is right

Q You say that the wash outside of the mining wash before 1875 is ten times greater than the mining wash since 1875?

A Yes sir

Q How much time do you include in your estimate of the amount of wash prior to 1875?

Q From 1869 to 1875
Q From 1869 to 1875?
A Yes sir that is the time that I knew the rivers
Q In your natural wash what do you include? A Everything that don't come from the mines, I include the dust in the sheet, I include the slides, the land slides taking place all over the neighborhood of country there, large land slides, acres of ground slid in and the rains have washed it off and washed it into the rivers, I include the pumping of cattle all over the country, sheep and everything of that kind loosening up the soil, I include the freezing of the earth

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and the pursuing of it by post and when it melts down again it becomes loosened and the rains carry it into the river, I include everything of that kind and call it natural wash that is not wash by mining

Q Do you include the wash from old mining dumps? A Yes sir

Q Is there any rock in the old mining dumps that decomposes and forms sand and eventually washes down?

A I saw that on Feather river in 1849 above Bidwell's Bar, I noticed there were some of the rocks that had decomposed but a very small quantity of it

Q Do you know whether or not slate and granite rocks will decompose

A I do not.

Q You do not know?

A I do not know that granite rock will

Q Do you know whether slate rock will?

A I do not know whether slate rock will either

Q Is it not a fact that all rocks in those mines excepting quartz will decompose eventually in a few years and will form sand and will come down the streams?

A You must go to a scientist. I do not know that, but I have seen slate rock broken up very fine, there is a place called Slate Range in Yuba County I have been there in 1850 and 1851 and since then once and I have seen a great deal of slate that has not decomposed but had

been broken up into small pieces and swept into the river but I did not say it would flout on the surface, in pieces the miners had broken it up or whether it had broken itself I could not tell

Q Well whether it does flout or not is entirely owing to the velocity of the current that is running over it is it not? A I do not know how heavy plate is

Q You know that any kind of material may be carried by water if the water runs fast enough? A Yes sir a short distance, not very far. I do not think that rock could be carried two miles

2. Dont yu know that water that is strong enough to carry that in suspension would carry it until the current of the water ceased so that the power of the water would not be sufficient to carry it ?

A If the power of the water was not broken at any place, it would perhaps carry it 100 miles if it was just as strong through the whole 100 miles it might carry it.

2. Have yu had any practical experience that would enable yu to say, whether or not a rock, boulder as large as my fist carried in the water running at 24 miles an hour, would with sufficient force to kill a man if it should strike him ?

A Now, I have not such experience

2 Yu have no experience

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on that subject at all?
A I do not know whether it would or would not. I can not tell you anything about it.
Q. In this natural wash you include the washings from old dumps, mining wash dumps? A Well, yes I include that, if there has been any natural wash, if there has been any old dump left on the river not taken away by the flood tide when it came I would include that, and include everything.
Q How many million cubic yards of material, has been washed from the mines since 1875? A I can not answer the question sir, I do not know.
Q. Do you think you can count within 500.000.000 cubic yards?
A. Nosir, I could not come within anything of it because

I could not tell you any particular quantity, I could not guess at the quantity because I do not know

Q How many million cubic yards have been washed by natural wash from the mountains in which those mines were located?

A I can not tell you that either, but I believe that there was a considerable quantity more of natural wash put into the river & that from the mines since 1875

Q How can you estimate the comparative amount of natural and mining wash without knowing the amount of either? A Well sir, I will explain that. In 1849 at the place where I have seen mining and at different localities where I have been, I know of my own knowledge, that is I am satisfied, just as well satisfied that I am that

2 and 2 make 4, that there was 50 times more material washed from the mines — I mean that they was more natural wash — Is that what you mean, natural wash 2 yes sir? A. Natural wash, a great deal more material natural wash than there has been from the mines since 1895, because the stuff that we get down from 1895 is this very dense material that we have been speaking of here.

2. But I ask you now how you can compare mathematically 2 amounts neither of which you know?

A I did not compare it mathematically.

2 You said it was ten times as much? A. I gave it as my judgment I said

2 How can you form a judgment as to comparative amounts without you know either amount?

A Oh, as I avowed compare the distance from here down to 2nd Street without knowing the exact distance. I owned do it in precisely the same manner

2 You owned compare the distance to China if you had never read anything on the subject, without seeing the country?

A Non, from here to 2nd St. where I have seen the country. I do not say China Sir, that is one of your own.

2 Ask you if that is not so, if you are not stating simply a belief instead of a judgment founded upon any reasonable basis of facts? A Non, I do stating my judgment, my belief founded upon good judgment in regard to the matter, in regard to the quantity of matter, the quantity of stuff that goes into the river; but I only take

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my own section of the country for it, I can not go into El Dorado County and tell you what they are doing there, but I can take San Juan and the ridge on which I live, and where my observation extends

2. Taking the San Juan ridge alone how many million cubic yards of dirt have been cast into the river from the mines in that ridge?

A I tell you that I could not tell you how many million

2 Nor you can not tell how many million of cubic yards came from the natural wash there? A. I say that there was more from natural wash

2. But I am coming to the question as to whether you can tell the amount?

A Nosir I can not.

2 You can not tell the amount, you could not

Come within millions or make any guess upon the subject as to the amount of either? A No, I do not pretend to

Q And yet you make a comparison of relative amounts coming from these two sources? A Yes, from natural observation, that is all, not from any calculation that I have made in regard to it systematically out from observation I have made with regard to the natural material that flows off the surface of the ground and goes into the river in comparison with the amount taken from the mines.

Q Do you ever see any material flowing off the surface of the ground or what you thought was the material after it is in the stream? A Yes, at Long Bar there was a slide and I watched the material going off

when the waters would carry it off and carry it into the ~~material~~ river and it is was light material none of it as heavy as this here, not a particle of it, but it was a light reddish cast mold that was so light that it was not soil, it was something that I can not tell you what kind of material it was, it was not sand, it was some sort of soil, but it was not soil that we would use for agricultural purposes, but it was a land slide, and acres and acres of land, and it all went down into the Yuba River and I often stood there and saw it going

2 Has there been any considerable amount of hydraulic mining on the ridge upon which you reside since 1875? A Yes sir, Considerable

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Q Avery great deal?
A Yes sir
Q And the material washed
has been of the kind which
you describe?
A Of this land slide
Q No, the kind you have
described? A Of this
other material, yes sir
Q That is composed of blue
gravel for 150 feet and the
gravel above that for a
distance of 130 feet?
A Yes sir, it covers not
average 130 feet, it is not
every place 130 feet, but
there are some banks 80 feet
and some banks 150, but
generally you may average
them at 120 or 130 feet, the
average in some places
higher 150 feet. On bank
of the San Juan hill, where
they washed out about
1¼ miles in extent and
nearly a quarter of a
mile wide that was washed
out in the years from 1861

to 1865

2 What is the depth of the red soil on top of these mines? A. In some places 3 feet and in some places 6, I have seen it 4 feet deep and in some places only 2 feet

2 And in some places none at all? A No, I never saw any place but what there was some, a little black soil and a little red soil below it. I have seen it where it has been 18 inches.

2 Have you seen the bed-rock crop out in these mountains.

A The bed-rock crops out

2 The top rock?

A The top rock

2 Hard pan? A No sir, not on top when you see that rock cropping out it is not in gravel beds at all. What you find in the gravel beds is a little white quartz covered all

over the ground, in pieces as large as I hold in my hand, and from that down to nothing, infinitesimal scattered all over the ground, you do not find any large rock.

Q You find most of this size and under [referring]?

a You do not find any of this rock cropping out over the gravel beds or anything of that kind

Q How long have you known those little rocks to be there on the surface?

A Wherever you find a gravel bed that has not been disturbed you will find little quartz rock on the surface of the ground all over

Q Does any grass grow on the hills there?

A Not much, very little grass

10289 Q It is not very good

for tailings?

A Yes, not very good on the hill side next to the Little Yuba River. The grass grows upon the hill but not upon that hill side that you speak of.

Q Well, where does the grass grow?

A Oh, it grows up upon the flat surface, and the surfaces above the hill sides, some grow on the hill sides but very little. There are veins of grass, it is very plentiful all over that portion of the country that is not being mined away.

2- Are the roots of the trees exposed there? A- Have exposed?
2- Exposed to view?
A- The roots of them?
2- Yes? A- Some of them are.
2- Any more than they are in the Valley?
A- Yes I have seen them a good deal more. Some of them were standing where the ground was washed away from them and it left the roots exposed a good deal more than in the Valleys.
2- Generally with reference to the trees, the roots of the trees are well covered?
A- They were not covered.
2- I say generally?
A- They are covered with leaves and the material that falls off of the ~~trees~~ trees
The roots of pine trees are exposed, and some are not Most generally they are covered
2- How many pine trees have their roots exposed on that ridge so far as

you know in and about the town of Sun Dance?

A- There are a dozen pine trees, that is what I would call pine trees-

Q- Ask you how many trees have their roots exposed?

A- There might be, but I was going to say that a mile or two out you will find some pine trees and oak trees but the timber has been pretty well cleared off in that part of the country. You have to go some considerable distance to find a pine tree or an oak tree

Q- Do you remember now any tree that has its root exposed on that ridge?

A- I can mention some but I would have to think. I can mention some old stumps where the trees have been cut down where to my knowledge the roots are exposed.

Q- But you can not

mention a tree?
A- I do not now think of a tree because I do not remember any near San Juan close enough to call to mind.
Q- As a general rule the roots of stumps are exposed in every country?
A- You say so. I suppose that is a fact.
Q- I ask you?
A- A good many of them are.
Q- That is the general rule with old stumps?
A- Yes.
Q- I do not know what the reason is, but that is my recollection of it?
A- Yes I think so.
Q- As for trees, you do not remember a tree with its roots exposed now. There is not one that you can mention?
A- Yes. I think I could if I would study it up. I could think of one. Yes I

will tell you where there is a tree that has its roots exposed. I recollect it, it stands on a side hill just opposite San Juan at the reservoir, what we term the town reservoir. The roots of that tree are exposed not clear to the bottom of the roots but some considerable distance below the former surface of the ground.

2- What effect does the town reservoir have upon that tree?

A- Not any it stands outside of the reservoir.

2- Where is the town reservoir with reference to it?

A- The town reservoir is upon a side hill about 150 feet above the level of Main Street in our town

2- And how with reference to this tree?

A- This tree stands on a bank next to the Milton's Company's Ditch that supplies

this tower reservoir with water.

2- Are the bank of the stream?
A- It is on the bank of the ditch.
2- Are the banks of the ditch?
A- Above the ditch. It stands there it is a big pine tree

2- How near to the ditch?
A- I should not think that the space between the ditch - the upper portion of the ditch is about four feet - four to six feet.

2- The water is constantly running along there, along in the ditch?
A- I suppose that what exposed the tree were the waters that have fallen above it and which has come down and taken the dirt away from the roots

2- The water coming from the reservoir? A- Yes Sir.

2- Water is constantly leaking and running down this hill?
A- Yes but this tree stands

above the ditch.

Q- But it does not stand above the reservoir?

A- Above the reservoir too. The reservoir stands below the ditch, because the ditch supplies the reservoir with water and the tree stands above the ditch and above the reservoir as a matter of course.

Q- That is the only one that you can remember?

A- That is all that I can think of now. You wanted me to find one, and I found one. I think the water has washed the earth away from the roots of that tree into the ditch.

Q- Wild flowers grow there in abundance now?

A- Not now. There was a time when they grew in abundance, but not now.

Q- They grow where the ground has not been trampled?

A- Yes some where it has.

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not been trampled by horses and cattle and goats running over the hills looking for something to eat.

2. What is the age of the tree you spoke of a while ago?

A. It is about two feet in diameter.

2. It is probably 200 years old?

A. I was not there when it was planted I can not tell.

2. You do not know how to tell the age of pine trees?

A. Yes I know how to tell their age if I should cut into them for the purpose of ascertaining the number of rings, but I did not do it and I was not there when it was planted.

Redirect examination
of
O. P. Stidger.

Mr. Dibble A question was asked you to what extent the people of San Francisco dependant on the mining industry. Please explain your answer in that respect.

A- My intention was to answer that all of the American population that came out in 1849, '50, '51, '52 and 1853 that stopped in San Francisco were dependant on the mining population for support sir, almost exclusively. and the industries that sprang up after were such industries as were connected with the mining population of this State.

Q- In that connection you also spoke of Sacramento?

A- Yes I say that Sacramento was a mining Camp exclusively constructed here for

the purpose of supplying the miners of this country for there was nobody else to supply, and the people that came here, came here to mine or to trade with the miners for the purpose of making money and there was hardly a man that I have ever met here in 1849 but who told me that he wanted to make his fortune and go home again. I did not find a man who wanted to stay here. I found no man when they came to California for the purpose of making his permanent residence here. I did not come here to live either.

2- You did not fully explain a reply made to the Attorney General in this case. I will ask you what effect will five, ten, or fifteen feet of deposit in the River, the Sacramento River have upon the flood overflows as

you saw them in January 1850.
Mr. Hart I did not ask him that question.
Mr. Dibble I will ask you then, in reference to the inquiries made by the Attorney General. What would be the effect of five tenor fifteen feet of deposit in the Sacramento River opposite Sacramento have upon the flood overflow as you saw it in January 1850?
Mr. Hart I object to that question it is incompetent. The witness has not shown himself to be a hydraulic engineer and this is not in redirect examination.
The Court sustained the objection.
2. You said that the material was not washed down- a portion of the material washed down in the flood of 1853 and you were proceeding to state the effect of the flood of 1861, 2. Finish

10300

your statement.

Mr. Hart He made the statement in full. He said it did not wash out fully.

Mr. Dibble Finish the statement?

A- My statement with regard to that was that this material that had been washed down in 1853 came from the mining that was done near Marysville, that is within seven miles of there- seven miles distance between Ousleys Bar and Rose's Bar. No portion of the material that was taken out above Rose's Bar came down except what was carried in solution or suspension. What the waters of 1853 failed to do in carrying that material down, the waters of 1861-'2 finished the work.

2- You were proceeding to say something or other about the effects of the floods of 1861, '2 on the river at Marysville?

A- That was the point. That is

what I meant that the flood of 1861, 2 carried the balance of the material down, all the material that was washed in the river before these hydraulic deep hill mining commenced. That was all carried down that material. It carried down the material that was placed in the River in the places I have mentioned. That material came down here, and it has filled up this River. It has worked its way down, and it will continue to work its way down, the light material. It will work on top, and fill up the vacuum.

Testimony
of
D. L. Bowers

called for the defendant. Sworn.

Mr. Dibble Where do you reside? A- I reside at Michigan Bluffs, now Dir, in the upper end of Placer County.
2- When did you come to California? A- In 1850.
2- When did you first come to Sacramento? A- In 1850, I believe.
2- Are you acquainted with the Middle and North Forks of the American River?
A- Yes with portions of them I am.
2- How long have you been acquainted with them?
A- Since 1853. 1852 or '3- 1853 that is the North and Middle Forks I mean. I was acquainted with the South Fork earlier
2- What is the length of the

Middle Fork of the American River from its junction with the North Fork up to the South?

Mr. Cadwalader I object to that it is shown on the Maps

The Witness You mean by the way of the River, following up the river do you mean?

Q- Yes? A- Well I should judge it was near 100 miles.

Q- What is the length of the North Fork of the American River from the junction up to the Summit?

A- Well I can not tell I never measured it the North Fork. The North Fork is a longer stream, some longer than the Middle Fork - how much I am not able to say but I think it is a longer stream.

Q- It is longer than the Middle Fork?

A- Longer than the Middle

Fork.

2- What bars are there in the Middle Fork- what bars were there in the Middle Fork?

A- Well it would take me a good while to tell you. There are a great many bars every quarter of a mile.

2- Give the names of the principal bars in the Middle Fork?

A- Well there is Murderers Bar, Mammouth Bar, Buckeye, Hoosier, Kenebec, Poverty Canyon, Spanish, Big. I have forgotten the names of a great many- there was Deadman's

2- What bars were there upon the North Fork from the junction up to the Middle Fork?

A- Well I never was so well acquainted with the names of the bars on the North Fork as I was on the Middle.

2- Name a few of them?

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A- Well there is Kelleys Bar

and Headmans.

2- What was the depth of the sand and gravel - the average depth of the sand and gravel in the Middle Fork from the junction up to the Summit?

A- The average depth?

2- Yes? A- That would be a hard matter to get at Generally the bars are very deep there.

2- Estimate it, or if you can not estimate it, state the depth in places?

A- From any twelve to eight feet. Some bars are eighty feet - Mariouth Bar for instance and the claim known as the Shoecraft Claim it is seventy five or eight feet and at the Rembee it is forty or fifty feet. Maine Bar is about the same. I can not give you the average at all, but I know they are generally pretty deep.

2- Were these bars so deep that you refer to, with sand

and gravel formed, by mining on the higher elevations?
A- No Sir. I think not, not all of them.
Mr. Ladewalader Yes is referring to the bars in their natural condition.
The Witness At that time there was not a great deal of mining on there.
Mr. Dibble Q- When did the mining on these bars commence? when you say the sand and gravel is so deep? A- Well there was mining when I first went there but the biggest part of the mining was in 1873-4, '5 and '6. There was more then that prior to that time.
Q- State how these bars were mined and what became of the material displaced by the mining?
A- Well they were mined by flumming the River digging the gravel out and

hoisting it up by means of derricks and the water was pumped out by pumps- rotary pumps and it was washed and the tailings were dumped again in the river below.

2- How many men were so engaged in displacing the sand and gravel naturally in the river?

A- I could not say, Sir.

2- About how many?

A- In 1855- I think there was one continuous string of flume about 16 miles long from what was called Markham Cut at Gray Eagle Bar clear down to below Maine Bar- one solid string of flume but the number of men I could not say how many there were. I have no idea.

2- With reference to the flood of 1862 what became of the material so displaced by the river mining with reference to

Sacramento Derby?
A- I do not understand the
question.
The Reporter read the question.
Mr. Cadwalader I object to
that question it is indefinite.
Mr. Dibble The object of the
question is to show that this
is the material that he sees
in the River here now.
A- I do not know what
became of it, but I know
the River was pretty well
cleaned out at that time.
Q- It came down here?
A- The material went some-
where I do not know where
it went to. It went down
the River, I do not know
whether it stopped at
Sacramento or in the A-
merican River or where.
Q- To what extent was
the North Fork of the Amer-
ican River filled with
gravel and sand?
A- Well I should think
nearly the same as the

Middle Fork as far as I know I never mined any on the North Fork only in 1856 when I mined a little while on the North Fork River.

Q- What divide is enclosed between those two Forks of the American River, the Middle and the North?

A- What is called the Forest Hill divide.

Q- What is the condition of that divide, the condition of that divide with reference to the wash of it, the natural wash? A- The natural wash? Q- Yes! A- Well there is a great deal of natural wash from that divide It is caused by various means, roads, trails, the plowing of the soil stock and so on— stock traveling over it.

Q- What has been the natural wash on that divide since 1875 compared

with the mining wash
as that divide?
A- Well I should think the
natural wash as you call it
is much greater than
that of mining, the mining
wash - much greater.
Q- How much greater?
A- Well I do not know as
I could answer that exactly
I should think it would
be five or six times
greater, taking a view of
the country and looking
and seeing the wash from
the heavy rains and the
ravines and so on that
are not mined and seeing
the muddy water come
down.
Q- Where was the flow
of that natural wash?
A- From the side hills,
the sides of the mountains.
Q- Into what?
A- Into the different streams,
the ravines, canons and
the river. We have a great

many canons, ravines and so on that flow from one into the other.

2- At what rates?

A- The Middle Fork of the American and the North Fork and into several large canons, El Dorado for instance, Volcano, Shirttail and Indian Canon They are all very deep canons

2- Take the wash outside of the mining wash, since 1875 and compare it with the filling in of the excavated pits made by miners?

A- Well I have said that I believe that it was four or five times greater than that of Mining.

2- How many times would it fill— the natural wash— how many times would the natural wash fill the excavated pits made by mining?

A— You mean by hydraulic Mining?

2- All kinds? A- Well,

I should think it would fill them four or five times, still I would not say positively because I do not know the cubic feet or yards that have been washed or the amount that it would take to fill them in.

2- What is the character of the wash, aside of mining, with reference to its being carried off by water?

A- The character of the soil there is generally light on the surface, light red, loam you might say. I do not know as you would call it loam but is a very light character of soil and it cuts into dust very easily.

2- What is the character of the material remaining in the mines to be worked with reference to density and porousability?

A- The character of the mining is generally heavy. The portion that has got gold in it is heavy material generally.

2- How far from the point of discharge would this dense and immovable material go? (A) Outside of the mine you mean or the mining material?

2- The mining material?

A- The grand portion I do not think would go any great distance after it leaves the mouth of the sluice. It generally stops where it is dumped out.

2- What distance? that is half of it or all of it?

A- The gravel is heavy and the sand is heavy.

2- What distance would it go? A- Well I would not be able to say what distance. It depends a good deal on the water behind it to carry it.

2- About how far?

Mr Leadbetter I object to

10314

this as being vague and indefinate. The witness says that it depends on the amount of water behind it

Mr. Dibble About how far with the amount of ~~material~~ water behind it?

A. Well I can not say how far really. I know that it does not go a great ways from the mouth of the sluice where it is dumped.

Q. One mile or two miles?

A. The principal portion of it does not go over 200 yards.

Q. Most of it does not go over 200 yards?

A. It keeps piling up, piling up and most of it stays where it is dumped, but a small portion is carried on down

Q. Have you any means of knowing to what extent that small portion goes?

A. I have no means of knowing only by the water being muddy and

knowing that the lighter
material goes on down.
Q- Does all kinds of mining
muddy the water, gravel
and cement and gravel
mining?
A- More or less it muddies
it. We have gravel there, that
we have mined and the
water sometimes did not
get very muddy in washing
it
Q- How mines are there between
the two Forks, the Middle
and the North Fork on that
divide?
A- How many mines?
Q- Yes? A- Well I would
have to study on that I
know them pretty much
all, but there are quite a
number of them being
worked now?
Q- About how many?
one hundred, five hundred,
five thousand, or how
many?
A- No Sir, there is less than

one hundred and fifty I think.

Q- One hundred and fifty?
A- Probably less, well say one hundred and fifty. If I sat down and figured it I probably could tell you every mine that is being worked on the ridge.

Q- Where do these mines discharge their tailings?
A- They discharge them into the Middle and North Forks of the River in Eldorado, Volcano and the Shirttails and the Brushy Canons.

Q- What mines or what portion of the mines on that divide discharge their tailings above Reed's Bridge, into the North Fork?
A- Well Sir when you get on that side I am not so well posted on the North Fork side as I am on the other portion of the Middle Fork. Some of the Iowa Hill Mines drain

their tailings above, but what ones I can not tell.

Q- What mines discharge their tailings into the Middle Fork?

A- Well Pond's at Todds Valley is one, and the Dardanelles and all the mines in fact from there to Michigan Bluffs - not direct into the Middle Fork but into Volcano and El Dorado Canon and they empty into the Middle Fork.

Q- What has been the gold production, between those two Forks on that divide?

A- I do not know sir I have no idea.

Q- Are you able to make an estimate as to the amount of gold production remaining to be earned in that district?

A- No sir.

Q- How many people are residing on that divide between those two Forks

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that are dependent upon mining?

A- I should think 15 or 2000.

Q- Are you acquainted with the Mines known as the Sunny South and Damascus? A- Yes.

Q- How many men are engaged in those two mines?

A- I think there are about 48 or 50 in the Sunny South Mine and from 17 to 20 in the Mountain Gate at Damascus.

Q- What kind of mines are they?

A- They are what they call tunnel mines drift mines

Q- How is the material taken from those mines and by what class of hydraulicking is the material washed, - what kind of hydraulicking?

A- It is a good deal the same as the material in the hydraulic mines

near the bedrock.
It is heavy quandly quartz gravel, Our deposits there mostly are all quartz, very heavy material.
2- How is the washing made or done?
A- The washing?
2- Yes? A- It is washed through sluices. It is hauled out of the mines in cars and dumped and washed into sluices the same as in hydraulicking.
2- Using the hydraulic pressure? A- Yes.

Cross examination
of
W. L. Bowers

Mr Leadwalader- Pandz Mine is at Todds Valley is it? A- Todds Valley Sir.
2- Where is the Vandanelles? A- The Vandanelles I think

is about a mile and a half up the river from Pauls on the same side.
2- They are both hydraulic mines?
A- They are both hydraulic mines. The Dardanelle is both a hydraulic and drift mine. They have drifted a good deal.
2- What hydraulic mines are there at Michigan Bluffs?
A- There is but one mine just one I think and that is called the Big Gun. There is another one down on Sage Hill but that is small- a six or seven inch hose.
2- There are only three mines of any importance that tail into the Middle Fork?
A- Only three on that side that I know of.
2- That has been the case for several years has it not?
A- Yes. Well three years ago they mined at Bath.

10321

Mr. Dibble Did you speak about the Mayflower.
A- No, the Mayflower is on the Brushy side. That is four.
2- How far is the Pond Mine above the Middle Fork?
A- In altitude?
2- How far is it from Pond's Mine down to the Middle Fork?
A- You mean perpendicular?
2- Yes? A- I should judge 150 feet.
2- And the Dardanelles about the same?
A- That is probably a little more.
2- And the mines at Michigan Bluffs about the same?
A- That is greater, it will run from eighteen hundred to 2000.
2- Under what pressure do they use their water for washing?
A- I can not tell you. I do not know.

Q- Several hundred feet I suppose?
A- I think it must be about
200 feet I suppose.
Q- And they have little Giants?
A- Yes.
Q- And pipes? A- Yes. Well
Pond when he is mining
it is not two hundred feet.
He does not require so
much pressure. He is not
working in the deep ground.
He is working on the
shallow ground but the
deep mining is all over 200.
Q- There is no filling in
the Middle Fork from
those mines is there?
A- There is more or less.
But not great filling. Ponds
tailings mostly lodge in
the cañon before they get
into the Middle Fork.
Q- I am not asking you
particularly about these
but whether there is any
filling of any consequence
in the Middle Fork from
the hydraulic mining?

Q- What did it fill?
2- Is there any fill in the Middle Fork from the hydraulic mines, that amounts to anything?
A- There is up there. There is considerable filling at the mouth of those claims and down always but as I said before the tailings mostly lay where they dump into the River
2- They lay in the river?
A- Yes in the river and in the canons.
2- What kind of tailings form the material that lies in the river bed?
A- They are formed of gravel.
2- Gravel and what else?
A- Gravel and sand a great portion of it.
2- What is the grade of the river at Michigan Bluff- opposite Michigan Bluffs?
A- I do not know Sir.
I have never looked at

1032

the grade and I can not tell
2- It is about one hundred feet to the mile?
A- I would not say. I have never measured it. I do not know what it is.
2- It is a swifter stream than the North Fork at least that is my recollection of it?
A- I do not know as there is much difference, there may be a little
2- It has a hard rocky bottom has it not?
A- So far as I know the bottom of the stream wherever there has been work, it has been hard.
2- There are a great many places where there are riffles and where the bedrock can be noticed?
A- Yes some places but not a great many.
2- And then there are deep holes and wide places in the River? A- Yes.

10345

2- That country is exceedingly precipitous is it not?
A- Yes.
2- It is about three miles ~~from~~ the trail, from the top of the divide down to Big Bar is it not?
A- From Todds Valley, NO Sir.
2- How far? A- I think it is a little over a mile and a half from Big Bar if I recollect right, but up higher from Michigan Bluffs down it is further.
2- How high does the Middle Fork raise, in the Winter, say at Michigan Bluffs, and at Todds Valley
A- Well I do not know exactly how high it ever rises, It rises as much as 28 or 30 feet I think I have seen it rise 28 feet
2- It will come up 20 feet in night will it not? A- Yes. I think likely it will rise 20 feet in one night.

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Q- How wide is it where it gets up 20 feet high?
A- At Michigan Bluffs?
Q- Yes or at Todds Valley?
A- Probably 150 feet or 200.
Q- How fast will the current run?
A- That is what I said I did not know. I do not know anything about it.
Q- Twenty or thirty miles an hour? A- I do not know.
Q- Very rapid?
A- It runs very rapidly. I do not know how fast water will have to go to go a mile a minute or a mile an hour. I do not know nothing about it.
Q- You have seen it frequently have you not?

A- Yes, frequently.

Q- Have you ever seen what the river has done in the way of tearing

out bridges?
A- Yes it has torn out bridges several times.

Q- And dams?
A- Yes and dams.

Q- And flumes?
A- Yes.

Q- And broken big logs into?
A- So I have heard I have never seen it breaks any into two. I think likely it does.

Q- That river is so rough that they never have been able to do any rafting on it?
A- None to any great extent. They have rafted some on it.

Q Dr tears the logs all to pieces down in?
A Below Todds Valley down they have rafted.
Q Dr tears the logs all to pieces
Mr Belcher I object to this it is not Cross examination
A I do not know any thing about tearing logs to pieces I never heard of any being torn to pieces. I have never heard of saw logs being torn to pieces in the Stream.
Q That is why they could not raft on it?
A Well it is on account of the big rocks and bars the big rocks sticking out in the bed of the River.
Q They have never been able to Navigate it at any Season.
A No sir it is not Navigable
Q It is very much like the Niagra in the winter
A Probably, I never have seen Niagara nor know nothing about it.

O Where were you raised ?
A I was raised in the State of Ohio.
O What part ?
A Sumner County
O You have no idea what the effect would be of running a shute of say Cobble stones as large as your head into say the Middle Fork when it is 28 feet high have you ?
A No sir not much.
O You have no idea where they would go have you ?
A Well if you were to shute them up on the River I think they would go into the River probably. Usually they would stay where they would land.
O You would think it would be impossible for the River to move them ?
A Well it does not move them a great ways I do not know whether it would be impossible to move them

Or not.
Q You think that the River does not even move sand
A I say there is a portion of the sand and gravel that lies in the River bed close where it is dumped
Q How long has the Sardinell mine been worked
A The Sardinell Mine has been worked since 1854 I think. They commenced hydraulicing in 1861-62.
Q Well you do not pretend to say to Mr Sibbee that there was any gold found in the red earth do you?
A No sir I did not. Still we find gold in the red earth I did not tell him anything about it that I recollect of but we find gold in the red earth some times.
Q But as a general thing?
A On the main divide we do not as a general thing.
Q But over the Mining Country
A Over the Mining Country, in

a district like Todds Valley for instance we found a great deal of gold in the red earth
Q But as a general thing over the Mining Country?
A No sir not unless it is what is Called surface diggings -
Q That Stratium of earth is very thin?
A Yes you may call it thin
Q And it all grows up with Chapparal in that Country
A Chapparal dont grow in the Country a great deal. Chapparal grows where there is bed rock near the surface there is very little soil where it grows. We have no Chapparal in our Ridge.
Q What do you Call Chapparal
A What I Call Chapparal — what I understand by Chapparal is manzineta. Chimese brush of various Kinds
Q What do you say Covers the hill sides from Murders bar to Todds Valley?

A That I should call Chapporal.
Q Very thick?
A Very thick in places.
Q How in Eldorado Canyon
A In Eldorado Canyon you do
not find very much Chapporal
Q How in Alpine Canyon?
A There is no Chapporal that
I know of.
Q How on the North Fork
slope?
A You may call that Chapporal
but it is a different Kind
from what it is in the Middle Fork up at Podas Valley
In there the Chapporal or
what they call Chapporal is
young oak and manzineta
Q Did that Chapporal grow
before or after the hills were
formed up there?
A I expect likely it grew
after the hills were formed.
I was not there at the time.
Q You have grass there when
the snow goes off?
A We have a little grass
Q Well the hills all get green

On the North and Middle Forks?
A No sir not with grass, they do with the leaves.
Q With Vegetation
A There is not much Vegetation outside of the brush — Oak manzineta and so on. We have a little grass where the brush grows.
Q You have flowers all over the mining Country — pretty much all over the mining Country?
A There are a great many places where there are not a spear of grass to the acre.
Q But the flowers are very delicate are they not. Why if there is so much wash do not the flowers get rooted out and the seeds get washed away?
A I expect they do.
Q How do the flowers return in the Spring if the seeds and roots are all gone?
A I do not Know that they

are all gone. I do not know that any of them are gone. I think Necessarily though that some of them are gone on the side hills. You will find very few flowers there.

Q You find flowers of all kinds on the side hills do you not?

A In the spring of the year we find a few - a very few timid flowers.

Q and very beautiful are they not?

A Yes some are

Q You find them where the banks are the steepest

A We find them where it is steep in shady places generally.

Q Very steep. You will find them all along on the grades?

A On the grades yes.

Q Blue Belles Indian Warriors and all kinds of Pinks and they come out every place

in the mountains in the Spring, That is so is it not?

Mr Belcher I object to this it is not in Cross examination

"

Recess Until

Thursday Jan 12/82

At 9.30 Am

10405

In the Superior Court of the State of California in and for the County of Sacramento

The People of the State of California
vs.
The Gold Run Ditch and Mining Company

Morning Session
Thursday
Jany 12/82

Transcript of Testimony
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Winfield J Davis
Official Reporter

In the Superior Court of the State of California in and for the County of Sacramento.

The People of the State of California vs The Gold Run Ditch and Mining Company } Morning Session Thursday Jan. 12. 1882.

Testimony of O.P. Stiger

Recalled.

Mr Dibble. Mr. Stiger desires to make a correction to his testimony.

The Witness. I was reading the Union this morning and I observed, in reading it, that it makes me say that I paid that the Sacramento River in 1849, while I was here, was about 450 feet wide. I should put it at double that quantity. If I paid so I made an error and I

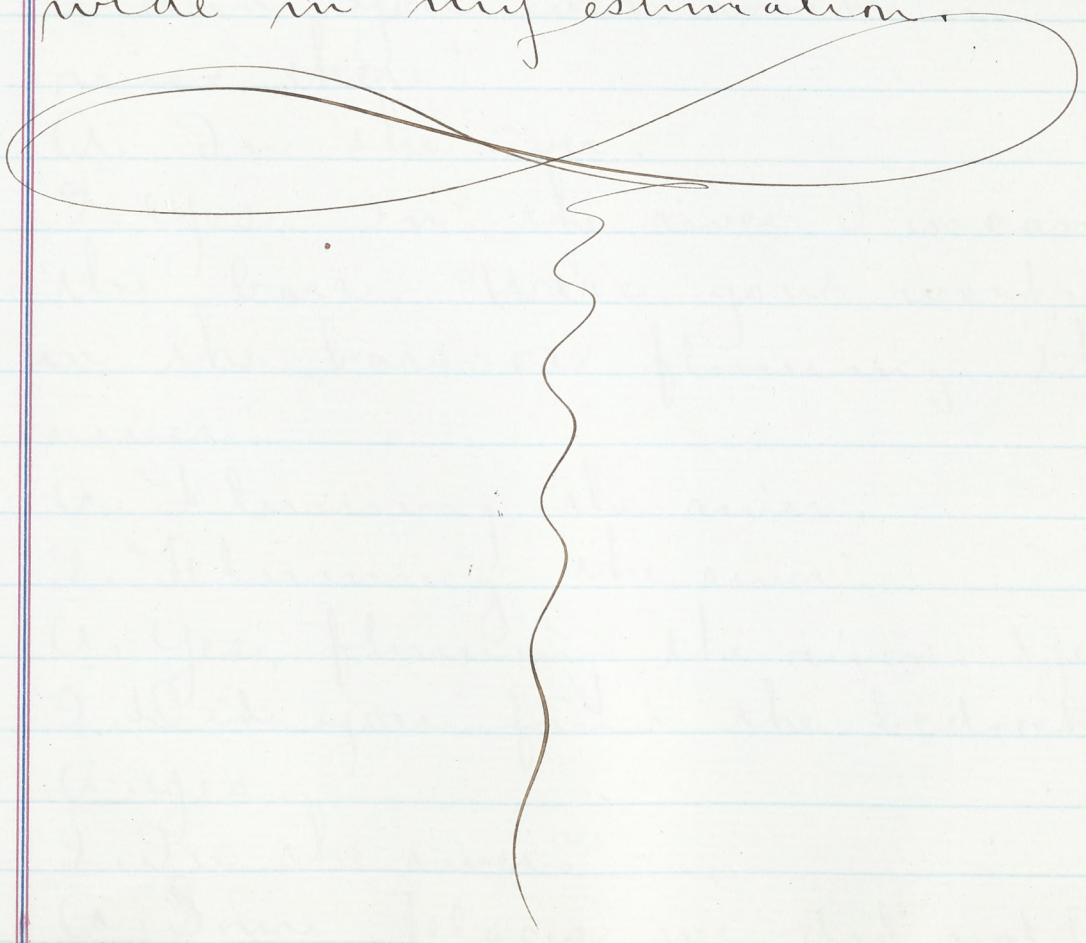
desire to make this statement.

Mr. Hart. You said it was the American River?

A. I meant it was the Sacramento.

Q. But you said it was the American that was 450 feet wide?

A. It says that it is the Sacramento. That is all that I desire to correct, because if I made that statement it was an error. The Sacramento River, at the time I speak of, in 1849, was at least twice 450 feet wide in my estimation.



Testimony of D. L. Bowers

Cross-examination resumed.

By Mr. Cadwalader. Q. You spoke about working on the bars in the Middle Fork?

A. Yes.

Q. In what years?

A. In 1855 I believe it was the first of it.

Q. When? A. In 1854 and 1855 I worked on the bars in the river.

Q. Did you ever work in the river there?

A. In the river?

Q. Yes. In the river I mean on the bars. Were you working on the bars or flumming the river?

A. Flumming the river.

Q. Flumming the river?

A. Yes, flumming the river. Yes.

Q. Did you find the bedrock?

A. Yes.

Q. In the river?

A. Some places we did not find

the bedrock.
Q. As a general thing you did?
A. As a general thing we did.
Q. You gave about the average filling to Mr. Dibble on that bedrock?
A. Yes.
Q. It was how much, five or ten feet — I do not recollect what you said.
A. I believe that I gave it from ten to twelve up to 80 feet.
Q. No, that is the bars. I am speaking of the river channels.
A. The river channels?
Q. Yes. What was about the average fill on bedrock where you turned the river and where you washed down through to the bedrock?
A. Well, where I worked, I should think it would average 25 feet.
Q. You got down to the bedrock?
A. Yes.
Q. That is a good deal over the average, is it not?
A. No sir, I think not.
Q. What kind of material was

that composed of?
A. Gravel, sand and boulders.
Q. Where did you find the gold?
A. We found our gold in one portion of the river, away up from the bedrock — I do not know how deep. We did not go to the bedrock in a certain place.
Q. What was the character of the bedrock?
A. Blue slate rock, hard rock.
Q. Very soft, was it not?
A. No sir.
Q. Where, there, was the gravel that you speak of?
A. In places it was very hard.
Q. and some places very soft?
A. A few places we found it very soft in the river.
Q. Where you speak of the bars being so deep, what were they slate bars?
A. As far as I know they were. Our country is a slate country up there.
Q. Well, where it was so deep, was it in the crevices?
A. No sir, not generally. The gen-

-ral run of the bars — some of them are as large as 60 feet deep.

Q. It was in slate, was it not?

A. Slate — the bedrock is slate.

Q. And in other places there are great crevices, are there not? They are are called that?

A. Yes.

Q. Well, there is one of these great crevices on Murderers' Bar?

A. They have been down there seventy or eighty feet — yes, eighty or ninety feet, perhaps one hundred.

Q. A great part of that is soft slate?

A. The greater part of that in Murderers Bar is lime stone.

Q. And the same away on the Spanish Bar?

A. Spanish Bar is slate.

Q. When you worked there, you did not disturb anything but the original drift in the river, the sand and the cobble stones?

10342 A. Yes, that is all.

Q. You simply took it up in one place and put it down in another?
A. Yes.
Q. That was the character of the river mining?
A. Yes.
Q. When did the mass of the miners, the principal part of them leave the Middle Fork country?
A. How early you mean?
Q. Yes.
A. Well, they left from 1857 on to the present time more or less.
Q. When did the great mass of them leave?
A. I can not say what year. I can not tell you what year exactly. They left from time to time.
Q. Those bars on the Middle Fork are very rocky are they not?
A. Yes, some are rocky and some are not so rocky. Generally they are pretty rocky on the bedrock and boulders — big boulders.

Q. It is almost impossible to find dirt as you go down?
A. No sir, not impossible. The further up the river you go the larger the rocks are.
Q. What would you take that to be? <Exhibiting a photograph to the witness.>
Mr. Dibble. What is that? I object. This is not in cross-examination.
The Court. Show it to counsel.
Mr. Dibble. We have not called out any testimony in reference to that from this witness.
Mr. Cadwalader. I want to show the face of the country and the mines.
The Court. Do you recognize that place.
The Witness. No sir.
Mr. Cadwalader. You recognize that as a fair representation?
Mr. Dibble. He says he does not. I never went into that subject.
The Witness. It depends on what points they are taken from — that it might be taken from

one certain point and I would not know it at all.

Mr. Cadwalader. I did not ask you that. I asked you if that is not a pretty fair representation of Rocky Bar on the Middle Fork.

A. Rocky Bar I know nothing about of late years. I knew it in early days.

Q. Is not that a pretty fair representation?

A. I should think—probably it would be.

Q. You would not have any difficulty in recognizing it?

A. Yes.

Mr. Dibble. I object. I did not examine him as to Rocky Bar or as to any of those bars. I confined the witness to that divide, the Forest Hill divide.

The Witness. I know where Rocky Bar is, but I would not recognize it by that picture.

Mr. Cadwalader. You are speaking of Rocky Bar on the Middle Fork?

A. Yes.

Q. That would be a fair representation of Murderers Bar?
A. It is a representation of the river. I do not know what bar.
Q. That would be a pretty fair representation of the Middle Fork, its whole length and breadth, would it not?
A. Well, it is pretty fair, I should think.
Q. Look at this picture and see whether that is not a pretty fair representation of the tail flumes used in the Dardanelles and Pond Mines: <Exhibiting a photograph to witness> and the tail flumes to ~~the~~ Michigan Bluffs and Forest Hill?
A. Yes, I should say it would be a fair representation.
Q. That is the cut, is it not?
A. Yes sir.
Q. With a flume in it?
A. With a flume in it.
Q. Those flumes you said were set on a grade from four inches to twelve inches.

10346 Mr. Belcher. We make the objection

here that if they have got these photographs for the purpose of introducing them in evidence that this is not the time or place to prove them.

The Court. Not unless it illustrates the cross-examination.

Mr. Belcher. It does not illustrate the cross-examination, nor does it illustrate the examination at all. We say that this is not a matter of cross-examination and that it is inadmissible here.

Mr. Cadwalader. This illustration is addressed to two senses. In the first place here you have what is called the tail flume of the Ondanelles Mine. You get some idea of the velocity of the water from that picture and you get the grade of it. I have presented it to the witness and he identifies it substantially as a representation of the tail flumes of those mines and yet he says none of this material would go down stream, none of this material leaves the dumps. And then again the

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says there was a great erosion of the country from the rainfall and very little timber in places. This is an illustration through the eye and we claim that it is a fair examination.

The Court. If it illustrates anything that the witness has testified to go on with it.

Mr Belcher, Our objection is that it does not.

Mr Ladwalader, We claim that it does.

The Court I can not tell until I see them I am sure, and perhaps not then.

Mr. Ladwalader. I presumed your Honor had seen them.

The Court This represents a portion of the county in Eldorado County, and he is not testifying about Eldorado County.

Mr Ladwalader. We claim that it was all formed by the same hand and that they are all alike.

The Court. That perhaps is handy an illustration,

Mr. Cadwalader. These represent the American River hydraulic mines.
Mr. Dibble. In Eldorado County.
The Court. This witness though has only testified as to a small proportion of that river and few bars.
Mr. Cadwalader. He testified that this looks like Rocky Bar.
The Witness. I would not recognize it unless you told me that it was Rocky Bar.
The Court. There does not seem to be enough in this matter to spend any time over it. The witness does not recognize this as representing anything that he has described. The objection is sustained.
Mr. Cadwalader. I want to present to the witness this picture and ask him if that looks like the banks mined by the Hardandles and Pond?
Mr. Belcher. I object to it on the same ground as I did to the others, that it does not purport to be a representation of these mines, or any of them.

The Court. Does it claim to be a representation of the mine that he has testified to?

Mr. Cadwalader. It represents the gravel that he has testified to and the the color of it.

The Court. But this is on the American River.

Mr. Cadwalader. We claim that these mines are all thick from top to bottom.

The Court. The objection will be sustained.

Mr. Cadwalader. We presented to the witness a few of the ordinary hydraulic mines as they are found on all the branches of the American River and we ask him whether that does not show —

Mr. Belcher. We object to the statement of counsel.

Mr. Cadwalader. I have not got through yet.

Mr. Belcher. Well, get through.

Mr. Cadwalader. We asked him whether it does show substantially the material in the banks of the Pond and Vandenelles Mines

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and also those at Michigan Bluffs.
The Court. It is not claimed to be a representation taken from any mine that he has shown himself to be familiar with — any particular mine.
Mr. Cadwalader. No sir.
Mr. Belcher. The objection is the same as before.
The Court. The objection will be sustained.
Ex. Mr. Cadwalader. We except.
Mr. Cadwalader. Q. What year did you leave the Middle Fork?
A. I left the Middle Fork — that is I have not mined any on that river since 1855.
Q. Not since 1855?
A. No sir. I am on the ridge between the North and Middle Forks; I have been ever since 1853 I think or 1852.
Q. Where have you been living during that time?
A. I have been living in the vicinity of Forest Hill and Michigan Bluffs from right along down. The last five years I have

been up higher in the sawmill and lumbering business.
Q. The last five years you have been in the sawmill and lumber business?
A. Yes. In the summer we run the mill and in the winter I devoted my attention to mining. We do not lumber any in the winter on account of the deep snow.
Q. You are known as a person who is engaged in the sawmill business?
A. Yes.
Q. You run your own sawmill or work in one?
A. I am ~~not~~ one of the owners.
Q. Where is that mill?
A. It is up in the vicinity of Damascus and away up at the head of Shirt-Tail Cañons.
Q. What kind of mining do you do in the winter?
A. Drift-mining.
Q. Not hydraulic?
A. No sir. I have hydraulicked

for a number of years.
Q. You never done any hydraulic mining?
A. Yes.
Q. Have you done any hydraulic mining since the Little Giant was discovered?
A. Since what?
Q. Since the Little Giant was mined?
A. Yes, some.
Q. When?
A. Well, I do not know what you call the Little Giant; there are so many.
Q. Well, the Dictator, the Monitor — they were discovered I believe in 1868?
A. In 1874 — 1873 or 1874 I believe I worked some.
Q. Where at?
A. At a place called Eldorado Hill near Michigan Bluff.
Q. Where did you tail to, where did you turn your tailings to, what stream?
A. Eldorado Canon.
Q. Michigan Bluff is at the foot of Eldorado Canon?

A. It is on top of the hill from the Eldorado Canon; it is at the junction, you may say.
Q. Where does your tailings go?
A. They go into Eldorado Canon and Eldorado Canon dumps into the Middle Fork of the American.
Q. What is the grade of Eldorado Canon there?
A. I do not know sir.
Q. It is a very steep canon, is it not?
A. Not what you might call very steep. It has quite a fall.
Q. It has a rough bottom to it?
A. Yes sir.
Q. It washes itself clean, doesn't it?
A. No sir not generally.
Q. The Middle Fork does, does it not?
A. Wash itself clean?
Q. Yes.
A. I have never seen it wash itself clean.
Q. Have you ever been at the Iowa

Hill dumps?
A. Yes.
Q. On the North Fork?
A. Yes. I have been there. I have never mined any there.
Q. Does the river wash those dumps clean?
A. The North Fork?
Q. Yes?
A. I do not think—
Q. (Int.) The tailings are piled up at the Michigan Bar dumps just as they are at the Iowa Hill dumps?
A. I should think about the same.
Q. And if there was not fill in the North Fork there would be none on the Middle?
A. No fill?
Q. Yes.
A. If there would be none on the North Fork, I do not think there would be any on the Middle Fork. There is a good deal of fill in both forks.
Q. Do the mines wash the same kind of gravel. Is the same kind of gravel washed out at Michigan Bar as at

Down Hill?
A. Some.
Q. What is the color of it?
A. Generally brown, a reddish gravel.
Q. Reddish gravel?
A. Well, they have near the bedrock some of them have blue gravel and so they have at Michigan Bluffs.
Q. How much loose gravel lies above the blue gravel?
A. How much red gravel?
Q. How much loose gravel lies above the bedrock?
A. I could not say.
Q. Well, about how much?
A. I do not know about how much. I have never paid close enough attention to it.
Q. 50 or 60 feet?
A. The blue gravel, I do not think generally is 50 feet; perhaps not over ten.
Q. I want to get at your idea and I want ~~to~~ you to tell me.
I don't know. About how much other gravel lies above the blue

gravel?
A. Well, it varies.
Q. From what?
A. From ten to seventy-five feet say. Then there is another stratum of matter on the top.
Q. What is the other stratum?
A. Lava and red loam on top of the gravel.
Q. That is the surface soil?
A. Yes. That gets deeper as you go in the hills.
Q. That is what the trees live on?
A. Yes, that is what the trees live on, red soil.
Q. How deep is that?
A. That commences from about a foot to ten, probably more; I have never paid close attention to it.
Q. Do they have any trouble in washing out at Michigan Bluffs, washing with water? A. Yes.
Q. Where does the trouble begin — when they get down to this cemented stuff at the bottom?
A. When the trouble begins?
Q. Yes: A. I do not know of any trouble that they have at Michigan Bluffs?

2. Well, can they wash that without powder?

A They do not use powder in their sandy, they use powder in blasting the lava, that comes down in large chunks and pieces and they blast that, but the gravel is generally soft

2 The gravel yields to water does it?

A Yes sir, very easily at Michigan Bluff.

2 Is that so in the Pond and Dardanelle?

A No sir, the Pond gravel is hard.

2 That is harder is it?

A She use Powder

2. Does it look like the stuff in those boxes, the Pond and Dardanelle?

A Yes sir, I should think it comes from near the top of the gravel, this is not from the bed-rock

2 When you get to the bedrock do you find stuff.

like that (Not)
A In places we do and in places we do not. The country varies, there are no 2 claims alike, there is always a little difference in them, thus I should think would overline the gravel in the drift diggings I have seen just that character of it
Q Do they wash any of that stuff there?
A Yes sir, you find that character of stuff washed in by drainlicking. This is the character of the stuff that Pond blasts
Q How deep is that in the Pond mine? A I do not know I could not tell you
Q Well about?
A I do not know I have not been in his bank in some years, I could not say about.
Q Not over 20 feet?
A I do not know sir

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Q What effect does powder have on that, Mr Bowers?
A I believe it yields to powder very readily, that is in Ponds claim, I do not know whether that is in from Ponds mine.
Q It yields very readily to powder, does it?
A Generally so
Q It washes very clean dont it? A No, it dont wash very clean, that runs portion of it a great ways
Q How far does it go from the mine before it gets washed
A Well, it starts washing right when it leaves the mine, it starts washing as soon as it gets out
Q When do the boulders or rocks in it get loose
A Some of them do not get loose at all, they go clean into the river. You will find boulders rocks like that, right in the river where it pays well enough

the crush it run it through Mills.

Q But as a general thing it is washed in a tail flume is it not?

A As a general thing, But as a general thing this character of stuff, I do not think has got much gold in it (Not) this character of gravel as a general thing dont bear much gold — It dont in my part of the Country

Q. They do not wash it in your part of the Country?

A Yes, they wash it, but as I say it dont generally pay much, it overlies the pay gravel, this as it said before overlies the pay gravel

Q Where does it overlie at Todds Valley? A. More or less over the mining portion of the Country, in some places there is none of this stuff through there

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and there are claims here that has, and then once to the next claim has none

Q Do you consider that stuff in those 2 boxes, hard to wash? A No sir, this I do not.

Q That washes very readily?

A That washes readily and goes off readily. This is a very light material, this stuff, probably this the stuff they send down here a good deal of it

Q Do you know how much a miners inch of water will wash of that stuff in 24 hours? A No sir.

Q You never noticed it?

A No sir

Q The Pond and Dandanelles I believe are the largest miners on that ridge, are they not, and the Iowa Hill?

A Yes, and the May flower I believe is about the same.

Q. Have they got substantially

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all the water? A Pretty much yes sir.

Q What is the water season on that ridge?

A The water season is of short duration there

Q Very short? A Yes sir

Q Shorter than any of the other ridges? A Our ridge is not well supplied with water

Q When does the water give out then? A Well, there is very little water in our ridge after the 4th of July.

Q after the 4th of July?

A At Dowd Hill I believe it runs later, they take their water up higher

Q are you troubled with ice there at the head of the ditches? A Yes, not a great deal. They are not high enough up to be troubled with ice, none of our ditches tap the river, they are all from the canons

Q. They all take the super-

fresh water? A Yes sir
2. So then it is not water on that divide after the water gets out of the canons?
A No sir, none.
2 You take and put your thumb well up on the Iowa Hill mine — I will put my thumb there on the Iowa Hill mine — you notice that (map) it is about 5 miles from there to Michigan Bluff, is it not?
A It is more than that, it is 13 miles
2. But across the county?
A It is more than 5 miles in a straight line
2. Well now, you come down here to Yankee Jim that embraces South Valley Yankee Jim, and Forest Hill? A Yes sir
2 I will ask you whether or not 3/4 of a mile does not be within 5 miles of Each other or about
A Yes sir, 5 or 8 miles

I think.

2. And that ridge owned
about 9/10 of all the mines
engaged in hydraulicking in
that County, on that ridge
A Yes sir.

2 That owned be a fair
Estimate wouldn't it?

A I should think so.

2 You have been there steadily since 1853?

A I do not think I have
been away a year at a
time since.

2 When do you say the
dump of the Pond Mine is,
just give me the Exact
place?

A I believe the dumps into what
is called the Dodds Valley
ravine.

2 But I mean on the
Middle Fork?

A Well, Dodds Valley ra-
vine empties into the Middle
Fork

2 at the Middle Fork?

A Yes sir, I think there is

Where the dumps
Q Where is the dump of the Dardanelles?
A That dumps into the Dardanelles Canon and thence into the Middle Fork from there.
Q How far is that above Todds Valley?
A Abot 1½ miles I think from Todds Valley
Q On the Middle Fork?
A On the Middle Fork side
Q Where is the Mayflower?
A The Mayflower is north from Forest Hill.
Q Does that dump into the Middle Fork?
A That dumps into Bushy Canon and Bushy canon into Shirttail, and Shirttail into the North Fork.
Q That comes out below Rees bridge, dont it?
A Shirttail, yes sir
Q And where do the Michigan Bluff mines empty?
A That as I told you before

dumps into El Dorado Canon
2 How far from its junction with the Middle Fork?
A It must be 40 miles from the junction of the Middle Fork
2. I mean to the junction of the El Dorado Canon?
A About 4 miles from the mouth of El Dorado & where they dump in — 4 or 5 miles
2 You do not know the grade of that canon do you?
A No sir, I never took the grade of it
2 Have you been at the dump of the Pond mine or the Dardanelle mine, in 5 years? A I have not. I have been down on their mines, in the mine, I have been in them mine but not down on their dump in 5 years.
2 Have you been there in ten years? A Yes sir
2. Have you been at the dump of the Forest Hill

mining in 5 years?

A I know of no hydraulic dumps at Frost Hill. I have not been there

2 You have never been there at all. Have you been at the dump of the Mayflower in the North Fork at the mouth of Shirttail Canon? A I have been at the Mayflower within a year

2 Well, I mean at the dump in the North Fork?

A Nope, I never was at it, that is where it dumps into the North Fork. They dump into Brushy Canon.

2 I know they dump into Brushy Canon. Do you know the depth of Brushy Canon? A I do not

2 About how long is it

Mr. Dibble I object to that, he says he dont know

Mr. Edwardes There is no mining done in the Middle Fork is there above

Michigan Bluffs?

A Very little it is mostly done by Chinamen

Q Do you know the quantity of water that runs in the Middle Fork?

A No sir

Q Have you seen the waters of that stream lately?

A Yes sir

Q When how long ago

A. I saw the water a week ago last Sunday

Q Where? A From the junction - down at the junction

Q Down near Auburn?

A Yes sir

Q. But I mean have you been up on the stream?

A I have not been right on the river, probably two months ago.

Q What is the character of the water in that stream?

A The character is like any other water, as far as I know

Q. Good drinking water, is it not? A It is, when you get it clear

Q. Well is it clear now or muddy?

A It is quite roily

Q It is what you call roily water? A Yes sir

Q What is the character of the water when the river gets up to a 20 foot stage?

A Well, it is roily then — muddy

Q What is the character of the high water in ElDorado Canon? A Well, the character of water there is the same as it is in the river There is quite a number of draft mines dump there tailings into ElDorado Canon

Q Well, when they are not mining on the stream, what is the character of the water, the year around? A It is generally roily and sometimes muddy, in the Summer Season ElDorado Canon has but little water in it

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Testimony of Thomas Price.

Called for defendant. Sworn.

By Mr. Belcher. Q. What is your occupation and profession?

A. Chemist, mining and hydraulic engineering.

Q. How long a time are you in California?

A. I arrived in California in October 1862.

Q. On what business did you first come?

A. I came here to pursue the business of purchasing and making advances on copper and silver ores for shipment to England.

Q. Shipping to England, for what purpose?

A. For reduction.

Q. At what place?

A. Swansea.

Mr. Hart. I object to that as irrelevant and immaterial.

Mr. Belcher. What have you had to do with the refining and assaying of gold and other metals?

A. I have been engaged — about six months after I reached the country I entered the assay office of Kellogg, Newston & Co. as their assayer and consulting chemist in addition to attending to the shipment of ore. I continued in their ~~surfa~~ service until they sold out to another firm called the San Francisco Assaying and Refining Works somewhere about the year 1866. I continued in the service of the San Francisco Assaying and Refining Works until, I believe, 1875 or 1876, to fix it more definitely until the time that the Bank of California failed. I then opened an assaying office of my own on the corner of Leidesdorff and Sacramento Streets, the old Pacific Mail Building and I have since that time been engaged largely in melting deposits of gold and silver and assaying all kinds of ores.

Q. What amount of ores have you handled within the last year

or what value of gold rather?
Mr. Hart, I think that is immaterial.
Mr. Belcher. It is to show his experience in this matter; that is all.
The Court. Go on.
A. Hundred last year, that is, 1880, $5,25,000,00; in 1881 Hundred a little over $7,000,000 in gold.
Q. Have you given any special attention to the question of gold and its production?
A. Yes sir, I have made that my special study.
Q. For how long a time?
A. I have paid most particular attention to the production of gold and silver since my arrival in this country, in the year 1862, but had paid considerable attention to it previously, commencing in the year 1859.
Q. What are the gold producing countries of the world at this time?
Mr Hart. I object to that upon the ground that it is irelevant and immaterial, and in making

that objection, I desire to announce at this time that, from this time onward, I intend to insist upon confining the witnesses to the material and direct questions in this case, and in making this objection at this time, I want to say furthermore that we have allowed great latitude in collateral questions without objecting; we have allowed them to prove the amount of gold that has been taken out and even the speculations of witnesses as to the amount that may be taken out; the amount of population in the counties; the amount of gold-bearing channels in the different counties, and the value of mining property and all matters of that kind which I think can not be addressed to the judgment of any Court. Now, from this time on, they having consumed two or three weeks with this kind of testimony, I will object to any testimony in this case except

such as tends to illustrate the propositions upon which the plaintiff and defendant rely; that is, the question as to whether or not they do cast their tailings into the streams and whether those tailings come down to this place. Those are the questions in the case and these other collateral questions, I think, have been sufficiently proven and if not sufficiently time has been consumed in undertaking to prove them. I understand it is the intention to put this witness on the stand and to consume three or four days in collateral questions in relation to his knowledge and his investigation of historical and scientific matter and I shall object as immaterial.

Mr. Belcher. The gentleman is greatly in error, if he thinks we expect to consume four days. We expect to consume but a short time unless the gentlemen should occupy the time, as they have heretofore,

in objections. They may thus protract the examination to a very considerable length. I think if the gentlemen will recollect that, when they put their witnesses on the stand, we allowed them to go into an examination of the questions that they sought to go into an examination of without objection except as to the forms of the questions. That was the only form of objection which we interposed and I understood then that it was the agreement or understanding that the questions, involved in the case, were to be presented to the Court as they saw fit and desired to present them, and that we should present them also, in the same way. Now, after the time that has been occupied on the part of the defense in this case, I think that the Court will agree with me that fully one half of the time has been occupied by the plaintiff in cross-exam-

-ination, and a very considerable portion with respect to some of our witnesses in objections, which have been interposed and argued at length here. We do desire, by this witness, to show the ex-tent and character of the industry, and we desire here to go into this question, not at length but very briefly, the question which is presented directly by the question pro-pounded to the witness and I shall desire to ask ques-tions in respect to some other matters that will be general in their character; those would be very brief.

Mr Hart The position that we taken in relation to this matter is this: that if gold mining is an important industry, gold mining may be pursued, and if agriculture is an important industry agriculture may be pursued but neither can be pursued in an illegal manner. It is not going to be denied by the Prosecution in this case that gold mining is an important industry, such denial even if based upon testimony of witnesses would not be believed by an intelligent Judge and hence it will not be denied; we have admitted repeatedly and repeatedly in this case, with a view of saving time that gold mining is an important industry. Now I ask Counsel himself in

what respect and in what
manner can the production
of foreign Countries in
the World, or of any
County excepting California,
in gold or indeed of any
County excepting Placer
County in gold, or of
any mine except the
Gold Run mine in
gold, in what respect
could that tend to illustrate
the question whether or
not the Gold Run Ditch
Company is tending to
increase a nuisance
which the plaintiff in
this case charges has
been committed by the
obstruction of navigable
streams? How could
it tend to illustrate it in
any degree? We are
inclined, as I said
before, to be liberal
and we are inclined
to allow them to prove
anything that tends in any

degree to illustrate the general question, but we are not inclined to sit here and consume the time of this Court and the time of Counsel on one side of the case and encumber this Record with things that are immaterial in any conceivable sense in which they may be put. I challenge Counsel myself to cite, in any respect in which this could be possibly material. How could it be material whether Germany produces gold or not, or whether France produces gold or not, or Italy produces gold or not? How could it tend to illustrate the question as to whether the Gold Run Ditch and Mining Company is pursuing the occupation of mining in an illegal

manner? Now we say mining is an occupation, mining is a legitimate occupation, but mining, a legitimate occupation, may not be pursued illegitimately, and that is the question which is before this Court, and anything tending to illustrate that question we are perfectly willing to allow to come into this case but we are not willing to sit here and listen to the speculation and learning scientific and historical which gentlemen of a scientific turn of mind may desire to give to this Court. for the benefit of this case and possibly posterity. We are willing to admit any kind of testimony that can be material but we say this is not material

and more than that we say that they have consumed a great deal of time. Mr Smith was on the stand for three or four days here and he was testifying very largely in relation to hydraulic mining, its entire history, and his testimony, as Your Honor remarked simply tended to call Your Honor's attention to that of which you would take judicial notice, matters of general historical knowledge and he testified to many scientific questions which simply tended to direct Your Honor's attention to questions of which Your Honor will take judicial notice. Now, why accumulate evidence upon a subject upon which Your Honor will take judicial

notice. It is not our intention to undertake to rebut these several things in relation to the amount of gold taken out of the earth or to attempt to rebut any historical proposition stated here unless it be found in the history itself; it is not our intention to consume the time of the Court in undertaking to rebut that part of the case. So we pray they have had enough witnesses on it, it will be very interesting and instructive to listen to Professor Price upon this subject but my business is so important that I cannot afford to sit here and listen to it

Mr Belcher. I am exceeding sorry that the gentle man's business is so

important that he cannot attend to this case

We think it material and proper that this should be shown, to show first what are the gold-producing Countries, the amount of production, the relative amount of the production of California and the importance of that production to the World as showing the character and value of the industry which by this action is sought to be controlled and stopped

The Court. Do you propose to show anything different or in addition to what you have already shown by Mr Smith

Mr Belcher. It will be somewhat more than what was shown by Mr Smith and somewhat

different yes, and I may here state to the Court, and yet I should hardly state it here because it would be just what I expect to prove by this Witness and hence I state generally simply the purpose and without stating what I will expect to prove

Mr Hart Now is it material

Mr Belcher. She is the last Witness that we expect to call upon this point and we have as yet called but one.

Mr Hart We do not intend to contradict that one.

The Court Since the testimony of Mr Smith is not to be contradicted it don't seem to me to be necessary to call any more at all unless there is some material

matter in addition

Mr Belcher There is material matter in addition and I will state to your Honor this: to show by the Witness here that at the present time the United States produces very nearly one half of the entire gold production of the World, and California has produced a very large part of that produced by the United States; that at the time of the discovery of this Country there were in the World only about 157 millions of gold, while at the Christian Era there had been over four hundred millions, and that that up to the time of the discovery of America had by use and by loss, been reduced to 157,000,000, and then that from 1493 up to the begin-

ning of the present century, there had been some 2360,000,000 introduced in the World for its use. From 1800 up to 1849 some 750,000,000 more; from 1849 or 1850 up to 1880 over 3500,000,000, of which California had produced nearly 1200,000,000 of gold, and then that the wastage and retirement of gold for the arts and for other uses, for jewelry, very largely and for other uses where it is permanently withdrawn from (commerce) is very nearly 10,000,000 a year, as tending to show the importance of the industry. Then we shall propose to follow that somewhat by showing the effect upon the civilization of the World of the increases in the gold product. That, however will be very brief.

The Court I do not suppose the last part you wish to show by testimony. I suppose you would hardly expect to introduce testimony on that, except the testimony of works on that subject. It seems to

me that all the subjects you have named, if Mr. Price has reference to authorities he can give them to you and you can give them to us.

Mr. Belcher. I will state in regard to that that Mr. Price has recently prepared a book upon this subject and he had occasion, in the preparation of his book to go very carefully into the study of the whole subject-matter and hence can bring it into a concise form.

The Court. You may ask him the general question, if you have presented those points correctly and then you can read them.

Mr. Hart. One objection of mine seems to have been ignored here, that this would be immaterial. It may be that a great deal of the testimony, being of a collateral nature, has been allowed in this case with a view of allowing them to

prove what they desire to instead of putting Mr. Price on the stand originally; one witness on such a question is enough.

The Court. I suppose most of these questions are of that character that authorities maybe quoted without any proof at all. I have seen myself statistics, perhaps I have seen the very ones that Professor Price prepared, quoted as to the consumption of gold; the amount entered in circulation at different periods, etc; and there would be no trouble in reading those.

Mr. Belcher. But a man, engaged in the study of such a subject will have access to, and the opportunity of making a careful examination of many matters that would not be accessible to all of us and hence the conclusions which he had arrived at, when stated by him and opened to cross-examination would present themselves very differently from what

would if we were to take the statement from the book and where we have not the privilege of cross-examining as to his sources of information.

The Court Would it not accomplish all you propose to ask, if he has correctly stated these things in his book:

Mr Belcher 2. Is your book yet published?

A. Yes sir.

2. And does that contain a full statement in regard to the matters which I was here seeking to ask you of?

A. Yes sir, substantially up to the year 1879.

2. And are the statements based upon a careful examination of the subject and a calculation of all the materials relating to the subject?

A. Yes sir; without any explanation; simply a question of figures, because it is a book that I was preparing, used by assayers all over ~~the~~ the

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United States, and Bankers as well as in Australia, for computing the value of gold and silver, according to the various degrees of fineness and this is a conditional matter, which in my profession I am asked about so often as to what is the gold product; which countries produce the most gold; where does the gold go; what is the movement of gold, that I just simply embodied that in this little book that I published so as to give that information.

2. I will ask you if your book contains a statement of gold at the beginning of the Christian Era? Ayessir.

Mr. Hart I object to his examining this witness on this subject at all. It is irrelevant; it is collateral in every sense if relevant at all; the witness says that he gives the general result in

the book. Now, let them read from the book: It is a matter purely historical.

The Court I suppose this is purely to inform counsel, not so much for evidence as to inform counsel whether he will accept that suggestion to take the book.

Mr Belcher Q. Does it contain a statement of the amount in 1493?

A yes sir; those periods are embraced.

Q. And does it contain a statement of the production from that time up to the beginning of 19th. century?

A. It does sir.

Q. And from the beginning of the 19th. century to 1849?

A. Yes sir.

Q. And from 1849 or the beginning of 1850 up to 1879 inclusive?

A. Yes sir.

Q And does it show also the present production of the

different parts of the World?
A. No, it does not show that.
It shows only the production of California from 1848 taken systematically. I have embraced the other simply as a matter of general information.
Q As to the matter shown there in the book, I will accept that and I desire to ask a question as to the gold producing countries of the present day, what they are?
Mr Hart, I object to that as irrelevant.
The Court, I think Mr. Smith went into that.
Mr. Belcher, I do not remember his having gone into it.
The Court, He spoke of Australia and Russia.
Mr Belcher, I think it was generally that he stated that Australia and Russia were gold producing countries, but I do not think he gave the relative production of those different countries.

10393

Mr. Hunt. It can not be immaterial in any sense. We do not question the right to take gold out of the earth; we do not question the fact that it is a great industry.

The Court. That is about all that there can be in it. We all know that gold is an important element in civilization. You do not require evidence on that.

Ex

Mr Belcher. The Court will sustain the objection subject to our exception, and I will make this offer that the gold producing countries of the world, as I expect the witness would testify ~~to~~ if allowed are the United States, now producing annually about 32,000,000; Russia, producing some 27,000,000; Australia, about 26,000,000; South America and Mexico 2,000,000, and that the production of the balance of the World is very small, less than 1,000,000.

The Court. This is the Book referred to? (Referring.)

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A Yes sir.

Mr Belcher. And that the production of the California mines is over 1/5 of the entire production of the World.

The Court. There is no other matter for Professor Price, upon which you wish to examine him?

Mr Belcher. Yes sir. There are other matters but that is all in connection with the book.

Q. What personal experience in mining have you had?

A. My experience commenced in mining in Wales, when I had to mine myself for a living: I subsequently was educated at the Royal School of mines in England and followed the business of educator in Chemistry and Metallurgy and Natural Science generally and since I arrived in this country I have been ~~lately~~ largely engaged as a mining engineer or rather what is designated here considerably as a mining expert, as a mining

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hydraulic engineer in connection with the Eldorado Deep Gravel Company as their managing director. I took cognizance of everything connected with the opening of those mines on the Placerville ridge as it is called and also the construction of a ditch for the Blue Tent Company, an English corporation; and a ditch some 32 miles in length. I have been connected with that property ever since the year 1876 and have had the entire control and management of its workings.

Mr Hart. That is in Eldorado County.

A. That is in Nevada County, Blue Tent.

Mr Belcher 2. As a mining engineer or expert, where has your business taken you?

A. It has taken me to all parts of California, Colorado, Nevada, Arizona, Utah and Oregon.

Q. Please examine this map. Now with that map before you Professor, state us to the extent and character of the mining in this State, gold mining and particularly the extent! First, I will ask you in what county there is mining, gold mining.

A. There is gold mining in the extreme Northern Counties, Del Norte, Siskiyou, Humboldt, Trinity, Shasta, Lassen and Modoc a little

Q. And as you go along state where it is the chief industry and where it is only comparatively unimportant? A. In Plumas County largely

Q. ~~Then~~ Suppose you begin again and say first at Del Norte? A. Del Norte—

Mr Belcher As to its character there and whether it is the leading industry.

Mr Hunt. I object to this witness giving any testimony

10397

as to the character and extent of mining in California, upon the ground, first: that the evidence is not relevant. It does not tend to illustrate any matter that is in issue or is usable in this case and consequently that a great deal of time has been consumed by them, and a great many witnesses have been examined as to the amount and extent of the gold industry in California and that evidence being admitted, this would be cumulative. Next: You objected to it on the ground that it has been admitted at all times in this case, and it will not be denied, that gold mining in California is an important industry. This then is a useless consumption of time

The Court Of course, if there is no proof to be introduced on the part of the plaintiff it seems unnecessary to take

at time with it.

Mr Belcher It may be questioned hereafter. The Professor has visited all the Counties, or nearly all the mining counties in the State and he has had an opportunity of knowing particularly as to the custom. We first then want to show the Extent and Character of the mining that is if it be gold mining — the Extent and Character of the mining — whether it is hydraulic or drift mining and what was the custom of miners, if he knows in that regard, in all those Counties

The Court I do not know in regard to that matter of custom but what it has been admitted

Mr Belcher I did not understand them to admit that. If they admit that, that will close the door to this examination

The Court I understood that it

was admitted that they dumped into the most accessible canons and ravines

Mr Belcher Do they admit that that has become a custom

Mr Hart. No sir, it is the practice

Mr Belcher It has become a custom and has controlled the decisions of the Courts.

The Court. You do not propose to prove by this witness that the Courts have recognized it.

Mr Belcher No sir

The Court. That they have always done it, has already been admitted

Mr Belcher The purpose we have of introducing this evidence by this witness, is to show the extent and universality of that custom, not only in the few counties right down here but throughout the mining counties of the State

The Court. It cannot be more universal than that - they always have done it. I understand

that the Plaintiffs admit that they have always done it, but they contend as a legal proposition that the manner of doing it is illegal. I do not see that you can prove anything more than has already been shown

Mr Belcher It might be important to show the character of the mining and the general custom which has prevailed in a very large number of the counties in this State. I do not know but that has already been proven as to the Extent

The Court. It seems to me, that everywhere includes Every place

Mr Hart. I do not intend to dispute the testimony of any of those witnesses and they have had several, on the subject

The Court. The disposal of it, where Ever it was nearest and most convenient. I suppose that is about the Extent of it.

Mr Cadwalader That was the

way it can proven and found in the Keyes Case.

The Court. I never read anything about that case, not even the decision. But I judge from what has been said in this case, that that is the way in which that question comes to be presented.

Mr Belcher Then with the permission of the Court we will reserve the right to make our offer simply, as to the nature of the Counties in which this industry has been and is carried on, and practically the extent, as for instance, in Alpine, that it is the exclusive industry and in some others it was a partial industry and occupying only a small portion of the people. I will then pass this subject

Mr Hart. I am willing that this witness shall name the mines without comment

Mr. Belcher I have stated what I desire him simply to comment

on
Mr Hart. I do not count to be compelled to cross-examine him on that subject.
Mr Belcher 2. Name the Counties then where mining is carried on?
A The Counties which I visited myself and where I found the business of mining conducted are first, Del Norte, Siskiyou, Humboldt, Shasta, Trinity, Plumas County, Yuba County, Butte County, Sierra County, Nevada County, Placer County, El Dorado, Sacramento, Amador, Calaveras, Alpine Tuolumne, Stanislaus, Mariposa, Merced, Fresno, Tulare, Mono, San Bernardino, Inyo, Kern, San Diego, San Luis Obispo, and some other mining in the coast counties like quicksilver mines in the neighborhood —
Mr Hart (Intg) You were asked about the gold mines?
A Yes.
Mr Belcher Was Los Angeles named?

A. I have not been in any of those mines and I know them only by hearsay. I know that there are some mines in Los Angeles County

Q Did you name Modoc?

A Yes.

Q and Lassen? A Yes. Modoc has a very small amount of mining. Modoc and Lassen I have not visited myself personally. I know there are mines there

Mr. Rhodes. Did you mention Santa Cruz? A No sir, I had some samples once from Santa Cruz.

Mr Hart. And Judge Rhodes says there was mining in San Francisco, 3 years ago?

A Yes, near the Ocean House there was mining, and it paid 3 Dollars a load, but what is seen on the dump is mostly brass nails

Q That was hydraulicked by the waves of the ocean

10404 Mr Belcher If in your ex-

amination of mine in Law had occasion to Examine or determine, State what is the Extent of the Olive gravel deposit or that deposit that is so called.

Mr. Hart. Where?

Mr Belcher In this State and in the Counties where he has Examined them

Mr. Hart. I object to that. It is irrelevant and immaterial and it does not illustrate any issue or issuable fact in the case. I object on the further ground that they have introduced a witness on this subject, as to the Extent of what they call the old river Channels and we do not propose to controvert what that witness said on the subject and we dont care anything about. The testimony cannot be cumulative and irrelevant. It does not include the mine in controversy.

10405

Mr Belcher Of course it would

include this mine

Mr. Hart. They may examine as to the extent of the blue gravel in the Red Rum mine and ridge, but as to extending it to the blue gravel in California, I object.

The Court. There is no objection to his stating the character of the mines being worked on the river. We have been investigating as to that

Mr Hart. Yes sir. But I object to going into the Extent of the blue gravel mines in California, that is, the length of what they call the river beds and the meandering of them

The Court. I made the remark, so that no one might be misled, that I presume there will be no objection to evidence as to the extent and character of that on this river that we have been investigating in this case

Mr Belcher The question I propose

is much broader than that. It is as to the length is mile, of what is known — so far as he knows — of what is generally designated as the blue gravel deposit, the ancient river deposits.

Mr. Hart. In California?

Mr Belcher Yes.

The Court. On that general question I understand there is no controversy

Mr Belcher I am not aware whether the length of it was proved by Mr Smith when he was on the stand, or not

The Court. He gave the value of it, and described where it was located, and he followed it on the map.

Mr Belcher I understand that that testimony will not be rebutted.

Mr Hart. No, we do not intend to produce any evidence relating to the ancient river channels, that is their length and present contents

Mr. Belcher As I understan
stated I am not certain in regard
to it hence I will make an
offer to prove by this witness.
I make the offer, and expect
that this witness will testify
if allowed, that the length
of the blue gravel deposit in
California is about 400 miles
from his knowledge it is
about 400 miles and that
the yield per mile is about
$5.000.000 and per running
foot varying from $100 to $2500
and that the average is
$1000, and that about 9/10
of it remains to be worked
Mr. Belcher 2. By what
means is and can the blue
gravel deposit be worked?
Mr Hunt. I object to that.
It is irrelevant and immaterial
how it can be worked. That
cannot tend to show that
the present means is legal
The Court. overrules the objec-
tion and plaintiff Excepts
Ex. A The only mode by

which the greater portion of those ancient auriferous gravel deposits can be worked, is by the process known as the hydraulic process

2. And what does that include. What does the hydraulic process, as you use the word, include? Or what is the hydraulic process, as you use the term?

A Using water under great pressure, being conveyed from great distances, through ditches for that purpose

2. Have you much acquaintance with the quartz mines of the State? A. I have not

2 Do you know the number of stamps used in that class of mining, say in 1861 or 1862 that were then employed?

Mr. Hunt. I object to that question. It is irrelevant and immaterial and besides it is a subject upon which a great deal of testimony

has already been introduced, and we do not intend to controvert the testimony that has already been put in on that subject

The Court. If it is confined to the American River, I suppose there is no objection

Mr. Stout. They have proven the number of stamps by 2 or 3 witnesses — 400 stamps.

Mr Belcher Smelting more than the American River is involved in this controversy. The American and the Sacramento are both involved in this controversy. They have shown the filling in the American River and in the Sacramento River and in Suisun Bay and in San Pablo Bay and in San Francisco Bay and they do not claim that the American River has done all this filling but that it came from the American River only in part

The Court. You wish to show

what other sources have contributed to the filling of Suisun Bay.

Mr Hunt. I think that is material, but we do not intend to offer any witnesses on the subject of quartz mines and stamps in California, and on the American and other rivers

Mr. Belcher Well, the American river then, and not Elsewhere.

Mr Hunt. I object to this witness testifying as to the number of stamps on the American River on the ground that it is cumulative and we do not intend to controvert the testimony already in

The Court. It does not seem though to be confined to that

Mr. Belcher I think it comes in bad grace to object, when we had so much cumulative Evidence on the other side which was received without objection

Mr. Hart. We did not know what you were going to controvert

Mr. Belcher I asked the question generally

The Court. So on.

Mr Belcher 2. as to the number of stamps in 1862 now if you know? a The number of stamps in 1862 was something over 600 — 611

Mr Hart. In the state?

a In the state. at the present time there are not less than 2720

2. 2720? a Yes. Of which 150 are engaged in the crushing of cement, that is the gravel that is drifted out

2. Did you say 600?

a 611. And 2700 at the present time, something about that

2. 2700 now? a Yes

Mr Belcher 2 Of which 2600 are engaged in quartz and 150 in cement

a Yes.

2 What is the average stamp

duty? A It will vary all the way for a ton and a quarter to 6½ tons depending upon the weight of the stamp and the character of the material they have to crush I think that they will average not less than 2 tons to the stamp.

Mr Hunt. What is quartz?

A Yes, quartz

Mr Belcher What is the average duty of those engaged upon gravel?

A. They crush all the way from 2½ to 6 tons, to the stamp. I would set down the average at about 4 tons to the stamp

2 What is the character of the material passing from the quartz? A. That is finely pulverized material which passes through what we call a number six sieve It will generally pass through a sieve of about 40 holes to a lineal inch, making

10483

40 times 40. That comes the the number of pieces that comes through an inch Square.

It is fine powder.

2 It makes it fine powder.

Alex.

10414

Q And how about the size of the material passing through — the gravel?

A It varies from one eighth of an inch to a quarter of an inch that is the size of the screen. The larger portion of it is pulverized to an impalpable powder but that is the size of the screens in front of the stamps through which the crushed material has to pass. It varies in size from an eighth to a quarter of an inch. That is the size of the screen so that in the pulverization anything that is small enough to pass through a quarter or an eighth of an inch goes through but simultaneously with the crushing a very large portion is crushed to an impalpable

powder

Q The computations have been for the most part here made in yards. Will you give it so that we can convert tons into yards. Give us the relation which they bear to one another?

A Yes. A mill crushing quartz — say we have 2600 stamps and they will crush somewhere in the neighborhood of 5000 tons a day

Mr Hart That is 2600?

A The total stamps engaged in the pulverization of quartz will reduce somewhere in the neighborhood of 5000 tons a day

Mr Belcher Q And that reduced to yards, how much would it be?

A 5000 tons — I will put it by the year. They take out in 300 days one million and a half of

tons. That would be about a million of cubic yards

Q That is to say, a ton and a half is equal to a yard?

A The 5000 tons a day, pay they crush 300 days in a year will yield one million and a half tons. Each ton and a half is, in round numbers, about one cubic yard, so that it would be the equivalent of reducing to powder about equal to one million cubic yards a year

Q And this million of cubic yards comes out in fine sand?

A In fine sands - fine sands and slime

Mr. Hart This million cubic yards per year is the total amount of these 2600 quartz stamps?

A yes

Q All the quartz stamps

in the State?

A yes.

Mr Belcher Q How many feet of broken rock make a ton? A 13 of quartz

Q Broken? A Unbroken in place in the vein 13; and broken, 20. Quartz in place in the vein, 13 cubic feet is the equivalent of 2000 pounds. Broken, and on the dump, but not crushed it will take 20 cubic yards to make a ton

Q That is the measure that is recognized everywhere? A yes that is a formula by which we estimate it

Q Not only by miners but among engineers? A yes.

Q How do you know of any mine, quartz mine, and if you do, name one of the larger of the quartz mines and its production.

A The largest quartz

mine in the State is the Sierra Buttes in Sierra County and they crush-

Mr Hart <atty> I would like to know the object of going into these details After he testifies that one million and a half every year comes from all the quartz mines in the State. I do not see the necessity for any detail

A <continuing> and the Plumas Eureka which is one Company over the ridge in Plumas County- they crush on an average about 120,000 tons a year.

Mr Belcher Q How many cubic yards?

A well nearly 100 000, not quite 100 000 cubic yards. If there had been 150 000 tons it would have been just 100,000.

Q Now it has been stated by witnesses here that 600 000 yards was the

amount worked by the defendant here the Gold Run Mining Company from its mines. I will ask you first –

Mr Hart <int'g> In how long?

Mr Belcher. Every year it is stated by the Witnesses

Q Have you seen the mine so as to know somewhat of the character of the material that is being worked there?

A I have sir. I visited the mine on November 19th last year, that is for the last time.

Q Now from what you have seen there state how in your judgment the rivers would be affected by the amount of material washed from that mine and from the Sierra Buttes

Mr Hart I object to the witness testifying on that

unless he shows himself competent to testmate the amount

Mr Belcher. I will pass that question for the present

Q What acquaintance have you had with drift mines?

A I have been connected with drift mining in El Dorado County and I am largely interested in that property where we have got several drift mines at work. I have examined a very large number of drift mines through various portions of the State, more particularly in Sierra County. I know several mines there and in Placer County and Tuolumne County and Calaveras County

Q Do you know the Bald Mountain?

A I do sir

Q State as to the amount removed from that mine

Mr Hart where is the Bald Mountain?

A It is in Sierra County near Alleghany. The town is Forest City

Mr Belcher Say from 1872 to 1880 the amount removed? The amount removed

A. During those years is 860 000 car loads

Q What is a drift mine?

A a drift mine yes

Q Now do those car loads measure? A Those car loads measure about a cubic yard

Q That would be approximately 860,000 cubic yards?

A yes In one year they removed as much as 106 000 car loads or cubic yards and some days it has amounted to nearly 5000 - weeks I should say, nearly 5000

Q Nearly 5000 in a week?

A yes

Q And in a single day

A A single day in the same proportion. Some days the proportion is very large

Q What is the character of the material from those mines?

A The material extracted from those mines is a fine cement or gravel. It is brought out and the cobble stones and the other rocks are left behind in the mine. This material is brought out and placed on the dump

Q Now how will this character of mining, the drift and quartz mining compare with the deep gravel mining the blue gravel or pay with the defendants mining as to the amount or comparative amount of material that will be moved or carried away from

the dump by water?

A In the case of the quartz and the gravel that is crushed when it is reduced to an impalpable powder and sand, it will be transported down just as far as the water has sufficient power to carry it and in drift mining a much larger proportion of course will be carried into the rivers; in fact a small portion is brought out compared with that brought out relatively from a hydraulic mine but a larger proportion of the material coming from a drift mine will be carried away into the lower channels of the river than will be of that removed by the process of hydraulic mining so called

Q State approximately

if you can or if you know the extent of drift mining in the State?

A Well it is carried on to a very large extent. In Sierra County there are many hundreds of miners engaged in this business and a little further North I believe, a little way from the Bald Mountain is another mine called the Bonanza mine where they are employing some one hundred men at the present time and they are bringing out from two hundred & three hundred tons a day of material. Down towards St Louis and Lapeer and Port Wine there are a very large number of mines at work at this same kind of mining

Q Those are also in Sierra County? A In.

Sierra County. In Plumas County also and in Butte County in fact they are in nearly every mining County. Down in Placer County there is a very considerable amount of this character of mining both on the North fork and on the Middle fork of the American

Q As to those Counties I will ask you more particularly, as to those Counties along the American river

Mr Hart They are Placer and El Dorado Counties?

Ayes and in Calaveras and Tuolumne

Mr Belcher Q Both these classes of mining use water? Ayes.

Q How old is this process of water washing for gold?

Mr Hart I object to that question on the ground

that it is irrelevant and immaterial

Mr Belcher. If he knows

The Court I expect that he would say that it is as old as history

Mr Belcher Yes that is it, and I have here before me a volume of Pliny in which he describes the gold mining in Spain and it is almost exactly like the gold mining in California

The Court There is no doubt about that, that it is as old as history

Mr Belcher. It is simply to call attention to the books. I think when you get to the Supreme Court they will let you read the books

Mr Belcher. I expect to prove by the witness that the matter of mining of that character is mentioned by Pliny

Herodotus, Strabo and by a later writer Agricola where plates are used and they describe the same kind of mining now carried on in California.

A I do not think it is necessary to prove that

Mr Belcher In speaking of the drift mines did you mention Nevada County? Ans sir I did not mention Nevada County. There are several in Nevada County. The only one I am particularly acquainted with is the Dutch mine when they are taking out something in the neighborhood of 100 tons a day

Q What per centage of all the gold produced in the world has been from hydraulic mining?

Mr Hart I object to the question as irrelevant and immaterial

Mr Belcher Q Or it was produced by that process of mining

Mr Hart We will stand on our objection

The Court I do not see the materiality of that.

Mr Belcher We offer to prove by this witness and expect that he will testify if allowed that at least 95 per cent of all the gold in the world has been obtained by the process distinctively known as the hydraulic. I will omit the word "distinctively" because that distinctively known here would be different

The Court You mean by the washing of sand and gravel?

Mr Belcher Yes.

Q Have you given special attention to the mines and mining upon the American River and its tributaries and

particularly upon that part of it embracing the Counties of El Dorado and Placer.

Ayes particularly those portions which run through El Dorado County - more particularly, but I know the mines also in El Dorado County quite well

Will you on that map point out those mines and name them giving a particular description

A On the North fork of the American river -

Mr Hart Cont'd We do not claim that all this stuff in the river comes from the Gold Run mine. Only their proportion comes down that they throw into the stream and which comes down here

Mr Belcher We say that none of it comes from that mine

Mr Hart Before the Witness proceeds to that I shall object to his testifying upon that subject upon the ground that a number of Witnesses have already testified in relation to the mines in El Dorado and Placer Counties and it is not our desire and it will not be our purpose when we come to the rebuttal to rebut the testimony that has already been given upon that subject either as to the number of mines or the amount of mining in these two counties

The Court This is to show as I understand where the deposits come from that are in the American river?

Mr Hart We will not deny anything that they have proven in regard to that subject in

relation to the extent of mining in those Counties

Mr Rhodes Unless they add more mines to the list already given I think the objection is well taken We do not intend to contradict their testimony as to the extent of these mines or their location on the river

The Court You do not propose to put in any evidence as to the sources from which the filling in the river has come?

Mr Hart Yes, but we do not propose to put in any evidence to contradict them as to the number of mines and the extent of mining

The Court The question is as to the filling in the river

Mr Hart The question asked is as to the location

and extent of the mining and on that subject we do not propose to contradict what they have already proven

Mr Belcher. We propose to go further than that. The Court understands and has stated correctly what we propose to prove by the witness

The Court The plaintiff put in considerable proof as to the sources from which considerable material in the American ruin came and this evidence I suppose is directed to that point?

Mr Belcher Yes.

The Court Proceed

A Above Cañon Creek or rather above the point where Cañon Creek empties into the North fork of the American river we come up to a place some ten or twelve miles

called Damascus. There is a drift claim that has been worked extensively. They have built a tunnel in now over a mile in length and the gravel has been excavated for an average width of over 300 feet for one mile in length. They have taken out from that mine probably all the way from 50 to 75 tons a day and have been doing that continually from 1868 to my knowledge. I visited the mine at that time and have made several other visits since. There are several other small mines

Mr Hart I shall insist that this Witness confine himself to what he knows.

The Witness I visited the mine and saw the gravel coming out

Mr Hart You saw the gravel that was taken out of a certain mine but do not want any probabilities.

A. The channel has been excavated for 5600 feet in length having an average width of not less than 300 feet. The gravel so excavated has varied from 5 to 8 feet in depth. There are several other mines in the same neighborhood tailing right in. Immediately over the ridge and immediately North of Michigan Bluff is another mine with which I am acquainted and which I have examined several times and I find that in two years and a half they have excavated in the channel

130 feet by an average width of 250 the depth of the gravel so excavated being from 5 to 8 feet and it is precisely the same.

Q What is the name of that mine?

A It is called the Golden Treasure.

Q When did they do that work?

A They have done it in the last year and a half.

2- During the last two years and a half? A- I was there some five or six months ago last. They had extricated in the neighborhood of #300,000 oz. It dumps into Eldorado Canon and finally finds its way in to the North Fork of the Middle fork of the American river.

Mr. Hart- That is not the North Fork upon which Canon Creek is?

A I did not say Canon Creek. I said Eldorado Canon. A little further down nearer Michigan Bluffs there are located several claims. I am only acquainted with one genrally known as the Weske Mine also known as the Hidden river. There they have excavated in the channel for a distance of nearly three thousand feet taking out from 50 to 150 feet in width by from three to four or five feet in depth. Following down that ridge I have noted quite a number of other drift mines and which I can not give you the details. Following right down now a little further South you come to Forest Hill.

2- Is that the name of the mine?

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A- No sir; that is the name of a town. On that ridge there are several mines that I have seen working. One of them is the Dardanelles, joining it is the Green Springs the Hope, the Baltimore, the Jersey, and then going further South comes the Big Spring, San Francisco and several other small claims the names of which I do not know until you come down to Todds Valley where Pond has been operating by hydraulic operations for a number of years.

Q- That is Todds Valley?

A- Yes.

Wm Belcher- Give the extent of these mines commencing with the Dardanelles Big Springs, Hope etc?

A- The Dardanelles with which is incorporated the Ore; the last time I saw it about a year ago or a little over a year ago, 18 months ago, they were washing then by the hydraulic operation. I was there first I believe in 1868 when they were washing that extensively by hydraulic operation and I was there later.

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Q- When you speak of Hydraulic operation

you speak that distinctively?
A-Yes sir. The Dardanelles the same and there is the Oro the same and there is the Green Springs and some seven or eight months ago when I was there they were not hydraulicking at the Dardanelles but were prosecuting it by the operation of drifting. Then on the top of the ridge there is another mine called the Excelsior Mine where they have sunk a shaft several hundred feet in depth for the purpose of drifting and upon which they have got a ten stamp mill. Going a little further over North again you get to Yankee Jims where there is quite a number of small mines working by various methods. You go a little further east to ~~Sierras~~ Valley or to Bath as it is, it must be Bath, there is the Paragon Mine and the Golden Gate mine both consolidated and are being worked and have worked into the hill-side-

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some 3,500 feet in length by about 215 in width taking out three or four feet of gravel.

Q. Where is that?

A. That is above the Sarahville, using twenty stamps with which to crush the gravel at the various times I have seen them and also they are washing by hydraulic operation.

Q. That is hydraulicking and drifting?

A. Yes. They are dumping into the middle Fork of the American River. I will follow right down now to the amount of work done on that River, on the middle Fork and I will come to Murderer's Bar, that is a little below the George Town road on the North side of the river. There are two extensive mines there at work working on old river bars. One is called the Mammoth and the other is called the Rocky Point. These men have sunk shafts in what was at one time an immense slide, going back into the hill several

hundred feet, it filled up the old river and in fact turned the river out of its course. There some 25 or 30 men engaged getting the material out of this old river bed — not the ancient channel but the present channel, but diverged out of its course, and throwing out dirt into the river. That is a little east of Murderer's Bar a few hundred feet. Now as regards the south fork of the american river I have got a map of that district that I am better acquainted with.

Mr Belcher. Before going there have you got above Canon Creek?

A. Yes. That was a point that went to Damascus — the Damascus mines above there.

Q. Is there anything above that? — have you mentioned the Sunny South?

A. The Sunny South or Hidden Treasure — that is the Hidden Treasure — The Sunny South is the name of the place and the Hidden Treasure is the name of the Mine.

Before leaving there I may go over to Iowa Hill. I have noted there considerable hydraulic washings going on. And one mine called the Rising Star or some such name, Jake Neff at any rate is the Superintendent and the Colemans of Grass Valley — there they have been drifting for some time and they were working on a considerable scale. I have seen them working there, but I know more particularly from the fact that I have always received their gold at my place coming regularly to me whatever they may clean up. I only know as to Iowa Hill that there is extensive mining there in passing through back and forth towards Damascus and towards the Sunny South because in the winter we have to enter that way from Damascus, we cannot go across the ridge on account of the snow. I do not know anything in detail particularly about the mining but I have seen a large ditch come in there on the

ridge and that the water was flying in every direction and washing and mining there.

Q. Now a question I did ask but which was not answered as to the extent of mining in those claims which you have mentioned as the Dardanelles, Green Springs, Hope, Baltimore, Jersey and Big Springs, taking it generally?

A. Generally I think from fifty to fifty five men engaged working at different times. I have gone into the mine, I have seen 15 or 20 or 30 men at work.

Q. And the extent of the mining?

A. The extent of the mining? It covers all over this section of the country coming down to Iowa Hill, Wisconsin Flat, Grizzly Flat, Elizabeth Town and you came right down in in the Yankee Jims and down to Forest Hill and Bath and Volcano and you go right up again to Deadwood and Last Chance. That is a place I left out which is on one of the branches of the North Fork on the Middle Fork of the

American river, one over at Grouse Canon and one up at a place that I do not see mentioned here. It is on the other side of the river called Canada Hill.

Q. Now tell us as to the extent or amount of the removal of material of the material removed from these mines?

A. Well that about Last Chance it is of a varied kind of mining there, mining in the canons working on old deposites and they are drifting there I know from 40 to 50 men I have seen at one time when I was there last engaged in the occupation of drifting. That is in Last Chance away up on one of the Forks of the Middle Fork of the American river.

Q. How many men were at work at Last Chance? 50 men?

A. From 35 to 40 men that I know of my own knowledge engaged in mining. Then I know of an operation that was working this year and has been working for several years on the middle fork of the Middle Fork of the American

River being supplied with water from Lambard's Ditch; it is right down there in a place near the Forks called Bushy Creek, some parties from Placerville, John Blair and others have been washing there on an extensive scale. I have not visited those mines for the last eight years but I know there is extensive mining going on and this ditch was built for that purpose several miles in length.

Q- You have not answered as to the amount of material moved from those mines, say the Dar-
-daneller?

A- Well I could only say that the quantity of material removed from there is very large during the seasons that they have got water.

Q- You have been there frequently so as to see the amount of excavation?

A- Yes. I made a careful estimate one time for a certain purpose and I found that there was

available water there in various seasons from four to six months and that the total amount of water that could be calculated upon for an average of five months was about twenty five hundred inches by availing themselves of all the Canons and each inch of water would remove from two to three cubic yards of material and they have got a great deal to be removed. There are two or three hundred men on the ridge mining by drifting and I regard that each man can remove something in the neighborhood of not less than three cubic yards.

2. That would be for how many days in the year?

A. For three hundred days in the year. That is as to the men working.

2. And yet that does not answer fully the question that I desire to have answered and that was as to the extent or amount of the material that has been removed from say the Dardinelli's, not in cubic yards but a general idea of the length and width?

A. Well there has probably been

not less than 10 or 15 or 20 acres hydraulicked from the Dardinell's and Oro and Green Springs combined with an average width of about 150 feet.

Q 20 acres with that average width?

A Yes.

Q You mean with that average depth?

A Average depth I mean of 150 feet.

Q Now then as to the amount or extent of the removal from these other claims which you have named Hope, Baltimore, Jersey, Big Springs, Pond, Yankee Jims?

A Well to go on in order, in the Pond mine I should think that they are working not less than 45 or 50 acres. That has varied considerably in depth all the way from ten feet up to 120 feet. It is on the sloping hill very marly material. Then you come further down and you pass over various claims, I should think that from the Dardinell's down to Sarrahville that is following

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on the Ridge there has been moved there probably not less than 15 acres following the vein, 15 acres by an average depth of 75 feet.

Mr. Hart - Where is that?

A. Following down from the Dardinella claim immediately after Forest city until you come to Bath, two or three miles in extent following along the vein there. Then you get to Bath, there has been probably 10 acres to a depth there of an average of fully 150 feet that has been washed down. Then you have got there in Forest Tunnels up to the Jersey and the others, they vary all the way from five hundred to twenty five hundred feet into the hill and they have been drifting out from 50 to 150 feet in width.

Mr. Belcher - And depth?

A. It varies all the way from two to five feet.

Mr. Hart - What mines are those?

A. The various mines, the Hope, Jersey, Baltimore, and then immediately on the other side of the ridge there

are probably not less than 20 acres washed away at Georgia Hill and Yankee Jim by a depth of not less than 100 feet that tails I believe into Shirt-tail Canon.

Q. How many acres?

A. 20, and all tailing into the middle fork.

Q. All those tail into the middle Fork.?

A. Yes sir. Down below Rices Bridge considerable

Q. Rices Bridge is on the North Fork is not it?

A. Yes sir. On the North Fork but they empty in lower down.

Q. When you said tailing into the middle Fork did you mean the middle Fork or the North Fork?

A. The middle Fork above the Junction of the North Fork.

Mr. Belcher. Then proceed to the other ridge?

A. Well I am going, George Town Ridge, going a little further south.

Q. That takes all of the Forest Hill does it?

A- I finished Forest Hill pretty near. Then I will go a little further down to Forest Hill coming down towards a claim of Peyton Powell a claim called the Mountain claim and Garden Point where they have done a very considerable amount of washing. There is more or less work being done, it has been done ever since I have been acquainted with the Ridge since 1866, all tailing into the Middle Fork. Now we will come to the other side, to the George town ridge # all that I can say about George Town is that I have noticed they were washing at different points a half a dozzen different mines the names of which I have in my note book but I can not remember them. But they have been washing there on a considerable scale. The mine that I am acquainted with is called the Jones Hill. It was a drift mine and at Greenwood.

2- As to the extent of the removal, state it as you go along. The extent to which work has been carried on there and the amount of

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material moved?

A- I could not give the details as to the amount of material removed there. It is more scattered than it is in any other place. It is much more scattered but I know there is a large amount of work being done there because the George Town ridge has about 8 or 9 hundred people living there. Little places all scattered through and the water is being used and flying around and I know there must be a considerable amount of mining.

Mr. Hart- That is an inference is it not?

A Well I have seen them washing, I supposed they were washing for gold; I do not know.

Q You say there was a great deal of mining there because there is a good deal of water there?

A Now I saw the men washing. There is an enormous amount of quartz mining there and a great amount of seam mining which is simply quarrying quartz out of seams in the porphyritic material, porphyritic

state. They made quite a gash in the mining.

Mr Belcher - Describe the seam mining there before you proceed.

A. The seam mining is composed of an enormous vein in the south decomposed slate generally of a V shape sometimes being from 50 to 150 feet in width; it is all decomposed and they put the water on it and it bears it right down; sometimes they blast and quarry it out in other places. The seam mining don't contain much quartz. It is composed entirely of decomposed porphyry or porphyritic slate and a soft material.

Q. An immense vein you say, very wide!

A. yes.

Q. And of a V. shape

A. yes.

Q. What is the character of the material?

A. The character of the material is similar to all this material (referring); it is soft especially when it is porphyritic as it

almost always is, it makes an impalpable powder or slime — a slimy light material.

Q. And after this has been washed out the gold is obtained from the washing of it carrying it through the sluices.?

A. Through the sluices in precisely the same way as by drifting or hydraulicking.

Q. And where is this material dumped?

A. That is dumped into the middle fork and South fork of the American river. But mostly into the middle fork. There may be some on the slope of the South Fork but it mostly goes into the North fork. On that ridge however there is quite a number of quartz mines at work. There is a thirty stamp mill tailing in on what is called the Gopher mine near Kelseyville. There are two other quartz mines a little further over in the direction of Spanish Flat. There is quite a number of altogether on that ridge tailing into

the South Fork of the American river, not less than 30 stamps.

Q. Where is Kelseyville?

A. Kelseyville, Spanish Flat, up in that direction.

Mr. Hart - I do not see the necessity of going over this testimony about the stamps. He has given the amount of stamps already and now he is going over the same thing again.

The Witness - Then I find that there is quite an amount of mining still being carried on about Coloma and Union town, both bank and ~~river~~ mining, that is mining on the banks of the present river streams and washing the various creeks that head in there, all tailing into the South Fork.

Mr. Belcher - Well give approximately the amount of material moved?

A - I could not give an approximation of the material at that point only there is a large number of men engaged. I will pass over now to the Placerville ridge. All the mines in this section of the

country tail either directly into the South Fork or into the tributaries of the South Fork here. The first mine there is the excelsior mine that follows to the Eldorado Water and deep gravel Mining Company. That has opened out to different points from north to south and we are using their water all the way from five hundred to a thousand inches a day for about seven or eight months in the year, washing by the hydraulic operation. The material not being so heavy. We are removing an average of about four cubic yards to each inch of water.

Mr Hart How many inches of water.

A From 500 to 1000.

Q What is the average?

A well David tell you. It is very difficult to give you the average there for the reason that it is the lowest property that the water buils into and they generally put the water on it when they can't sell it elsewhere, or when the water wastes. I should think at least 6 months in the year they are using an average of 800 inches. Then following up there is a mine that was started there some few months ago called the Standy mine.

Q You pay four yards to the inch? A yes sir about. The Sturdy mine is about half a mile South of the

Excelsior mine, there they are washing with about 400 inches of water for probably an average of five months in the year. Then we go up to a place called the Maynard claim and the Loomis claim where very considerable work has been done in the last five years averaging there not less than 1400 inches of water for 8 months in the year

Q What mine is that?

A That is the Loomis and the Maynard mines together

Q What did you say was the amount of duty there?

A They are using about 400 inches of water for about 5 or 6 months in the year or six months because they are working

continuously.

Q What did you say the amount of duty per inch was?

A Well I say I think about 4 cubic yards as an average on our divide there and I will follow a little further North now and go over to the White Rock district there is used probably an average of 250 inches of water for 8 months in the year.

Q What is the name of that mine? A The Union mine and the Vineyard mine, the Reservoir Still mine, quite a number there that I do not know the names of it is.

Q All those together gave 250 inches?

A Yes sir they change off from one to the other and the next mine is

the Spanish Still mine which we have worked to a very considerable extent. Latterly we have put in a new 3 foot flume and intend to work on a larger scale. In this section of the County again there is located 1st the Placerville Quartz Mill crushing about 750 or 800 tons a month; and a little further over is the leased mill of the Reynold Company called the Reed Mill Oneleine, ten stamps. And then there is a Quartz mill again called the Oregon Mill near the Placerville mill. Then we have there in that immediate vicinity 20 stamps crushing gravel belonging to the

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Lyon Company
Where is that?
What is up at Prospect
Flat and immediately
on the other side of
the hill from there,
a little further to the
North is the ten stamp
mill called the Ben
Foldt mine. Then im
mediately a little
further to the South a
mile and a half is
the mill of the El Dorado
water and Deep gravel
mining Company at
Texas Hill ten stamps
crushing gravel and a
little further South
and near Placerville
there is another ten
stamp mill engaged
in crushing gravel
called the Cedar Company
and then near the town
of Gold Hill, between
Coloma & Gold Hill
there is a ten stamp

mill crushing quartz
Q what is the name of that? A The Kimball Mill
Q what does the Cedar Company crush?
A gravel
Mr Hart Those gravel stamps are in hydraulic mines are they? They are used in hydraulics?
A they are used for crushing gravel
Q In hydraulic mines?
Ans that is not hydraulic mining
Q they are used in hydraulic mines to did? Ans they are used for crushing the cement that comes out of drift mines
Mr Belcher Sometimes in hydraulic mines?
A If you mean by hydraulic mines to be all mining in the ancient channels this is hydraulic

mines but we call them drift mines where the gravel is too hard ~~and~~ to decompose or to disintegrate rather. Then there are three or four other little mills that I do not remember the details about also at work there.. Then going still further North to Smith's Flat —

Mr Start <utty> That is still on the South Fork?

Ayes sir. It tails into Weber Creek which is a tributary of the South Fork. Some of these mines tail into Weber Creek and some into Stangtown Creek. Coming up to Smith's Flat there is a ten stamp mill engaged there and there is considerable drifting

A gravel you say?

10462 Ayes sir all gravel now

And then we will come up to Blakeley reservoir about five miles West of Placerville, there there is a little hydraulic mining going on they are washing a meadow a large number of acres there being mined and using about 100 inches of water for seven months in the year washing a meadow to a depth of 5 or 10 feet. He has washed away there already over 30 or 40 acres Blakeley has. Then we follow up on the ridge until we come to Sportsman's Hall and then all along there there are large numbers of men engaged washing in the Canons and in the Creeks. Now come with me if you please a little further South and we will go to

Pleasant Valley

O How many stamps did you see at Sports man's Steel?

Asley don't use stamps they simply wash the surface in the old channels hydraulic and ground sluicing

Q Give us the amount

A I could not give you the amount, there is quite a large number of men engaged in removing a large quantity of material and throwing it into Weber Creek and into the South Fork both ways, depending on which side of the ridge they are on. Coming to Pleasant Valley, at Newtown they have a ten stamp mill crushing gravel. Coming to the South fork of Weber Creek there is considerable hydraulic mining

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scattered all through there one mine called the Tennessee Still mine that was working some two years ago, whether it is working now I do not know. They were using then 500 inches of water about 3 or 4 hours a day. That is about the amount of mining that is done on the tributaries of the South fork of the American river. And I am acquainted with Mr Belcher. Now that Com Still property of which you have spoken there, Com Stollen, that you are pretty well acquainted with?

A I am perfectly familiar with that

Q What is the value of that property and what has been its product, Com Stollen?

Mr Hart I object to that as irrelevant and immaterial I object to their going into the value of those mines. They have proved that it is an important industry and I have admitted it until I am ashamed to admit it again

Mr Belcher I do not propose to go into a general examination but as to this particular property I do desire to ask him because the witness is thoroughly acquainted with it

Mr Hunt I object to his proving the value of Coon Stollen on the ground that whatever may be its value it would be no defense. It is utterly immaterial

The Court I do not see any special materiality in it Mr Belcher

Mr Belcher The Court

will exclude it. I am not now advised as to the value and I will reserve the right to offer as to that and proceed Something has been said here in regard to Monitors and other improvements in mining operations. What effect has been produced by the introduction of those improvements?

A The maximum removal of earth with the minimum amount of labor. The Monitor is used, the force of the water rather by the aid of the monitor forces the material from the bank into the flume and sluices instead of by the aid of labor

Q State these improvements added to the amount of material removed

A I say as between the year 1862 up to 1872 when the Monitor in its present shape came to commence to be used, I would say that there is no more material not as much material rather removed into the rivers and into the bed of the streams at the present time subsequent to 1872 to the present time as there was prior to the year 1872 and between that and 1862

Q There was more material removed from 1862 to 1872 than from 1872 to 1882?

A Yes sir

Q Why? A For the reason that I found men engaged in the business of mining all along the banks of the rivers, washing

in the old banks of the present rivers, in some instances going in 100, 200, 300 or 400 feet in order, the bank varying from 5 to 30 or 40 or 50 feet and every drop of available water from the ordinary Canons was stored up and caught during rain storms and held there until they would wash. Then again in many places there were innumerable ditches here and there and everywhere one or two or three miles in length taking water from numerous ravines and then putting the material into the river and using at that time sluices with very heavy grades much more so than at the present time

Now I find that at the present time all these little ditches have been done away with; they are no longer in existence and the miners rely now entirely upon the water they receive from the large ditches, the water under high pressure and the volume of water is much less at the present time than it was during that period.

2. Does the amount of material removed, depend upon the character of the material itself?

A Yes sir.

2. How does the character of the material that has been mined any within the last six years compare with that, which was mined during the first six years that you were acquainted with mining in this State.

Mr. Hart I think that is immaterial except as addressed to the material contained in the Gold Run Mine and Ridge.

Mr. Belcher, And the American River and elsewhere?

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The Court. I suppose it is addressed to an idea or argument that has been thrown out here that the amount of material has increased with the the invention of the monitor and the construction of large ditches.

Mr. Hunt. I asked them whether a monitor would not move as much as a thousand men and we proved it by Judge Blanchard I believe, but the question as to the character of material that has been removed in Nevada County, how can that tend to illustrate the question as to the whether or not the material from the Gold Run Mine will be cast down into the valleys and rivers.

The Court. I suppose it is addressed to that idea — I do not know how important it is — that the character of mining has changed in the latter years, that more material is thrown into the creeks and rivers and it is increasing the obstruction to

navigation and the injury of the farmers; if that has anything to do with the final disposition of the question I do not know; but such an idea has been thrown out and I think in your opening speech — it has been thrown out anyhow in the case.

Mr. Hart. It came out from the examination of the witness: they were undertaking to prove that the monitor did not increase the amount of material removed. If it becomes a question as to the character of the material, it seems to me that this testimony, as to the character of the material, should be addressed to, and should be confined to the Gold Run District.

The Court. A great deal of examination has been addressed to the Placer mines. A part of your testimony was that in the placer mines they did not throw out so much in the river and that of the others

that they threw more in — whatever that was worth — I suppose this is addressed to that same point Mr. Hart. Let him answer the question.

A. The material during my experience here was of a much lighter character and the same volume of water would remove a much larger quantity of it, and the monitors are now at present used in flowing the material into the beds of the river, it being of a much heavier material and there being not as large a volume of water in use as formerly, there are no reasons why it it does not bring as much material down to the valleys. The monitor as nothing at all to do except in removing the material and placing it in the river. It has nothing at all to do with carrying it down. It removes it.

Mr. Hart. I move to strike that out, the argumentative portion of this first answer where he says that therefore the monitor does not bring us much down in the valley as was brought down before.

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Here recess is taken until 2 o'clock P.M.